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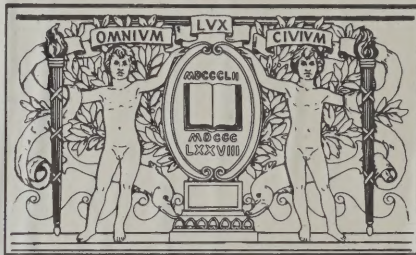
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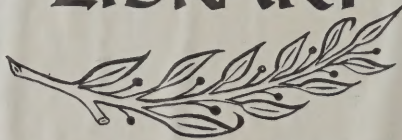


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BMA-0076

A PROPOSAL TO THE UNITED STATES  
DEPARTMENT OF DEFENSE

FOR DEVELOPMENT PLANNING ASSISTANCE IN REGARD TO

CHARLESTOWN NAVAL BASE  
SOUTH BOSTON NAVAL ANNEX

Proposal Submitted by:

CITY OF BOSTON, Kevin H. White, Mayor  
BOSTON ECONOMIC DEVELOPMENT AND INDUSTRIAL COMMISSION, Gerald W. Bush, Director  
BOSTON REDEVELOPMENT AUTHORITY, Robert T. Kenney, Director









CITY OF BOSTON  
OFFICE OF THE MAYOR  
CITY HALL, BOSTON

KEVIN H. WHITE  
MAYOR

May 7, 1973

The Honorable Francis W. Sargent, Governor  
Commonwealth of Massachusetts  
State House  
Boston, Massachusetts 02133

Dear Governor Sargent:

I am submitting herewith for your approval a proposal outlining the planning process to be undertaken by the City of Boston for the conversion of the Boston Naval Shipyard from a defense installation to facilities for various civilian uses.

The closing of the various defense installations in Massachusetts will have a substantial effect on the economy of the communities in which the facilities are located. These closings mean the loss of some 5600 jobs in the City of Boston alone. At the same time, the closings make available some highly valuable land and facilities which, if properly developed, could mean a considerable benefit to the economy of the City and the Commonwealth.

It is my expectation that with the cooperation of the City and the Commonwealth, as well as other public and private organizations, we will be able to plan and implement a favorable conversion process.

The attached proposal calls for substantial public investment. In addition to an investment of \$208,725 of the City of Boston resources, the proposal requests Federal assistance of \$430,325 for the eighteen-month planning and development period.

With this submission, I request that you approve the attached proposal and transmit your approval to the appropriate Federal agencies so that we can begin the conversion process.

Very truly yours,

Kevin H. White  
Mayor of Boston

KHW:cnn



for Doc

Plate only



PROPOSAL TO THE COMMONWEALTH OF MASSACHUSETTS

AND

THE INTER-AGENCY ECONOMIC ADJUSTMENT COMMITTEE

for Development Planning  
assistance in regard

to

Charlestown Naval Base

and

South Boston Naval Annex

Proposal Submitted by:

City of Boston/Kevin H. White, Mayor  
City of Boston/Boston Economic Development and Industrial Corporation  
City of Boston/Boston Redevelopment Authority

Kevin H. White, Mayor  
Gerald W. Bush, Director BEDIC  
Robert T. Kenney, Director, BRA







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## Executive Summary

### Part I

#### Overview of the City and Development Goals





## EXECUTIVE SUMMARY

This proposal is a request for \$430,325.00 for development planning assistance in regard to the reconversion of two (2) military bases: The Charlestown Naval Base and the South Boston Naval Annex.

The purposes of the work to be done under this grant are:

1. To develop with the military an exact description of the properties (land, buildings, piers, personal property, etc.) to be converted and a timetable for conversion;
2. To survey and "replan" the development potential of the bases and the areas surrounding the bases;
3. To determine the optimum feasible total reuse potential of these two facilities in relation to their surrounding neighborhoods;
4. To determine the private and/or public firms or agencies best able to implement the planned activities; and,
5. To syncheronize the conversion process so that new development can be scheduled to replace existing activity with a minimum of downtime and personal dislocation.

A detailed breakdown of the work to be performed is found, starting on page IV-4-1.

## BACKGROUND

The Charlestown Naval Base and the South Boston Naval Annex have been a significant integral parts of the Boston economic and social scene since 1797. (Part I of this report)

These facilities have provided direct and indirect employment for thousands of residents of Boston and the greater Boston area. They have been well integrated into the Boston economy. Thus, their closing will mean serious economic and social dislocation.





The City of Boston in 1970 and 1971 was confronted with the prospect of Charlestown being closed. At that time a series of studies were made of possible reuse alternatives. These must be reviewed and updated.

As recently as two months ago the City's Economic Development and Industrial Corporation (EDIC) inquired of the Navy the status of the Army base building. This 1.6 million square foot structure could have tremendous reuse potential for light manufacturing. These plans will have to be restudied in the larger context of the current total closings.

In order to lessen the negative impact of the closings, a comprehensive development plan and strategy must be quickly developed. (see Part III)

#### THE BASES

Section II of this report presents a very brief overview of the two facilities. In summary, they represent a total land acreage of ± 251 acres (Charlestown 84; South Boston 167). Turned to "normal market forces", both these facilities might become dead storage warehousing, freight forwarding, underutilized dead space, or tax exempt.

If these "normal market forces" can be influenced - and there is every reason to believe they can - more than 15,000 new jobs can be created. This would represent greater employment after the closing than before.

#### REUSES OF THE BASES

The two bases present different opportunities. Therefore, separate, but coordinated plans will be developed for each. (Section III of this report) In order to develop these plans, large quantities of data must be quickly developed, tested, analyzed, and





integrated.

Development alternatives must be formulated and tested for financial, and technical feasibility and, finally, for community acceptance.

Building upon previous studies done by the Navy, the Boston Redevelopment Authority (BRA) and EDIC the first task is to complete a total physical inventory. Based upon that inventory, alternative development strategies must be formulated, and their feasibility tested. This will have to be a team development effort utilizing skills in land and water transportation, urban economics, facilities planning, industrial development, housing, historic preservation and port development. Likewise the talents of numerous City and State agencies must be integrated. Primarily, the skills of the Boston Redevelopment agency, and the Boston Economic Development and Industrial Corporation must be integrated. This will be done. (see Part IV)

A task flow schedule should be carefully followed on the indicated schedule. (see following page)

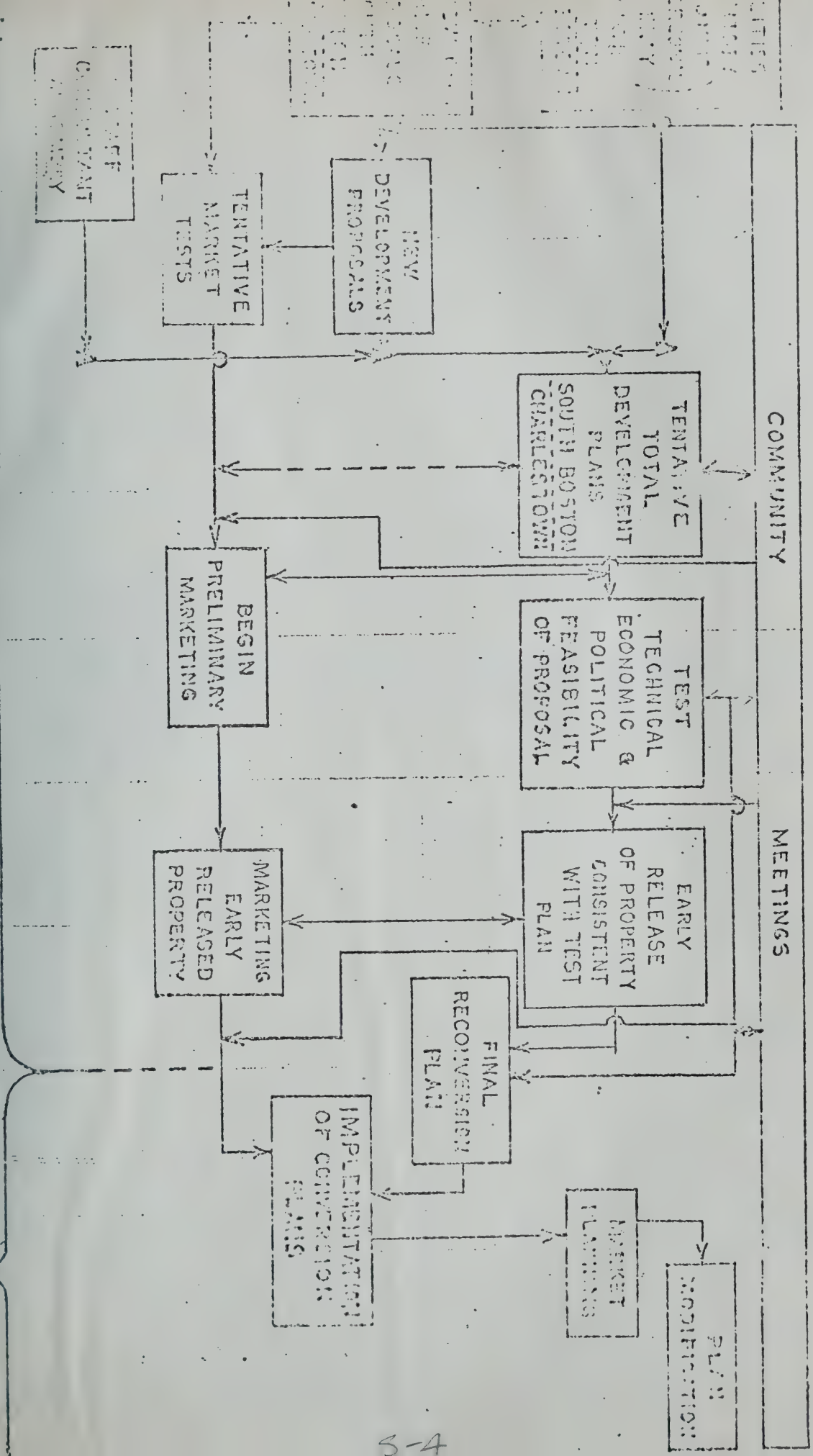
This effort will require a tight organization structure and an appropriate budget. For details on these matters see Section IV of this report.





# GENERAL PLAN SOUTH BOSTON/CHARLESTOWN DEVELOPMENT PLAN

2 3 4 5 6 7 8 9 10 11 12 13







PART I

1. AN ECONOMIC OVERVIEW OF THE CITY OF BOSTON





# 1 AN ECONOMIC OVERVIEW OF THE CITY OF BOSTON

## A. Introduction

The structure of Boston's economy has been changing visibly over the last 20 years and continues to change at this time. While certain sectors have experienced dramatic progress and growth, others have found themselves to decline. It is in these declining sectors that a large portion of Boston's residential population finds or seeks to find employment.

Trade and manufacturing have in recent years declined in Boston while finance, service industries, and government have experienced a constant growth (see Table 1).

Overall, in the past 10 years, Boston has experienced a growth in total number of jobs, after significant declines in the late 1940's, 1950's and early 1960's.

Again, however, it is not the manufacturing sector which has experienced this growth. Between 1947 and 1968 this sector declined by 43,500 jobs. Analysis of the various sectors of the economy reveals importial locational and income considerations for Boston residents.

Ironically the growth sectors -- government, selected service and finance, insurance and real estate, are located primarily in the downtown area and offer lower wages on average to Boston residents. At the same time the declining sectors are located predominatly in Boston's neighborhoods and offer higher wage and income opportunities for Boston's large blue collar population.

The closing of firms and relocation outside the city, has contributed to the underutilization and increasing blight of many





TABLE 1

Percent Change in Boston Employment by Sector 1955-1968

Industry	Private Employment 1950	Total Percent Change 1950-68	Private Employment 1968
Wholesale & Retail	141,500	-17.0	117,500
Manufacturing	97,200	-28.7	69,300
Finance, Insurance, Real Estate	47,600	+33.3	63,500
Service	46,600	+44.3	67,200
Transportation, Communication, Utilities	34,100	+ 8.9	37,100
Communication	17,900	- 2.4	17,500

Source: Massachusetts Division of Employment Security, 1968





areas with proximity to residential areas.

Significantly, then, it is a large portion of the city's neighborhood taxpaying population, and ultimately, the city itself, which is suffering from the decline in trade and manufacturing industries. It is only in recent years that the city has begun to give concentrated attention to the plight of these firms outside the downtown area.

And the city must continue to develop new incentives for these "declining industries", for even in decline they account for well over 50 percent of the total city employment. In 1947 they accounted for 66 percent.

The city has focused particularly upon manufacturing as an area to hopefully benefit from local government interest. Public policy can more readily influence its location decisions than it can those of retail trade or construction firms for example.

The payoff for assisting manufacturing is potentially enormous in terms of:

- increasing household income
- increasing the productive use of land appropriate for non-residential activities.



Boston's concern for the productive job and wage opportunities of its citizens must address itself to one central paradox:

The declining sectors offer higher wages than the expanding sectors.

In its effort to develop a local economic strategy Boston is trying to foster the following: full utilization of land resources; increased per capita income; increased municipal tax receipts; and, an occupationally more fluid labor market. Not uniquely, Boston is concomitantly looking for the growth of stable high paying jobs for its residents. Jobs that have manageable entry levels for our labor force, jobs that have long career ladders, and jobs that use high amounts of labor per unit of scarce land resource.

Wholesale and retail employment is the largest single sector in the economy, comprising 32 percent of the private sector. Wholesale, the smaller of the two, is predominantly male, with fairly good wages. However, it utilizes large areas of space and has a fair amount of non-resident employment, especially in the higher wage levels. Retail, which accounts for the bulk of the group, is predominantly female, clerical, low-wage and seasonal. Although it does hire many residents, it too, is a fairly space-intensive use. Overall, the average wages in this sector were a low \$6,000 annually in 1968.

The construction industry is the highest wage sector in the economy. It had an average wage of \$9,300 in 1968, and it is almost all male household heads. The problem is that it is very seasonal. Most construction workers consider 40-45 weeks a full year's work. And while residence is a difficult thing to judge, it would not be surprising if a large segment lived outside of Boston. Furthermore,





construction only accounts for 4 percent of total private employment and increasing the supply of workers is a very difficult and long-term process due to the craft union arrangements. Finally, local government can do little more than it already is doing to boost this sector. Though there are many worthwhile projects like low-income housing, that could be started, funds available for such needs appear to be limited for the next few years.

Transportation, communication and utilities is another high wage sector -- an average of \$7,900 per annum in 1968. The sector includes Metropolitan Boston Transit Authority workers, railroad, shipping, warehousing and trucking, airlines, telephone and telegraph and the gas and electric workers. Except for warehousing and trucking, these services cannot be expanded greatly without investment in track, planes, roads, etc. Also warehousing uses large areas of space. Except for telephone and telegraph, the sector does hire mostly family heads. Overall, this sector is only 9 percent of total private employment.

Finance, insurance and real estate had an average wage of \$7,000. The sector is largely clerical and most of the high paying jobs go to suburban residents, so the \$7,000 figure probably overstates the average resident wage. However, this sector may be the most labor-intensive. For example, 200 square feet per employee is not unusual. Also, unlike manufacturing and transportation - utilities, this sector operates best in vertical space. Yet, any employment growth expected in this sector, will probably occur with or without government aid. While nothing should be done to hamper growth here, there is some question as to whether local public action would greatly increase the employment benefits already projected.





The service sector is very diverse. It includes hotel, business, and personal services, auto repairs, amusements, legal and medical service, private educational services, museums, art galleries, and miscellaneous services. The service sector probably has more residents than finance, insurance and real estate. This is reflected in its low wages of about \$5,700 on the average. Also, this sector is more space-intensive. Its career ladders are more regimented, with internal promotion restricted. Just as in finance, insurance and real estate, growth will occur here with or without local aid. But even if this was not the case, the wisdom of focusing much local aid here would be suspect in view of the low wages.

Manufacturing by all seven criteria, has appeared to be the best sector for the main thrust of an economic program in Boston (see Table II). Its wages were a high \$7,200 annually in 1968; however, the city's manufacturing survey of 1970 revealed a weighted average wage of \$7,400.8. The sector's work force was 60 per cent male. Relative to other sectors, manufacturing jobs are more usually held by city residents. With the exception of apparel, in which 30 percent of the firms have seasonal employment, few other industries report much seasonality. This may in part be reflective of the tight labor market in 1969 which is certainly looser now. Manufacturing is also fairly labor-intensive with an average of 500 square feet per employee. Career ladders are typically longer than in other forms of employment. Also, there are a large number of jobs. Manufacturing is the second largest employment sector followed closely by service employment and finance, insurance and real estate.

In addition, there are several more reasons for concentrating effort in the manufacturing sector. First, regardless of the growth



of white collar employment in the central city, the higher paying blue collar jobs will continue to be essential to the non-college educated primary wage earner and especially important to minorities. A reduction in the number of manufacturing jobs in Boston would force factory workers to leave the city or accept a job from the more plentiful positions in the lower paying service, finance, insurance, real estate and retail trades. The latter alternative would doubly reduce per capita income because more people would hold lower wage jobs and because surplus labor would depress these low wages further.





### C. Structural Problems of the Public Sector

The central paradox of this sector is that unlike any other major urban area, Boston is forced to rely upon a property tax for nearly three fourths of its revenues.

At the same time, 42 percent of its property base is tax exempt.

The combination of slow growing tax base due to a heavy reliance upon the property tax, separation of management responsibility from fiscal accountability, a high proportion of tax-exempt property, and very rapidly rising cost factors have driven the tax rate up despite strenuous efforts to keep municipal costs at a minimum. If there is no significant change in the above factors, the tax rate by 1975 could be above \$200.

Economic development can make a contribution by expanding the property tax base, and by increasing incomes so that more and more households leave the poverty or near-poverty ranks. The change in income distribution brought about by better jobs should reduce many special poverty-related city expenditures.

At the present time Boston has been saddled by the State Legislature with a number of large metropolitan assessments, for example Suffolk County costs, as well as Metropolitan District Commission and Mass Bay Transit Authority.

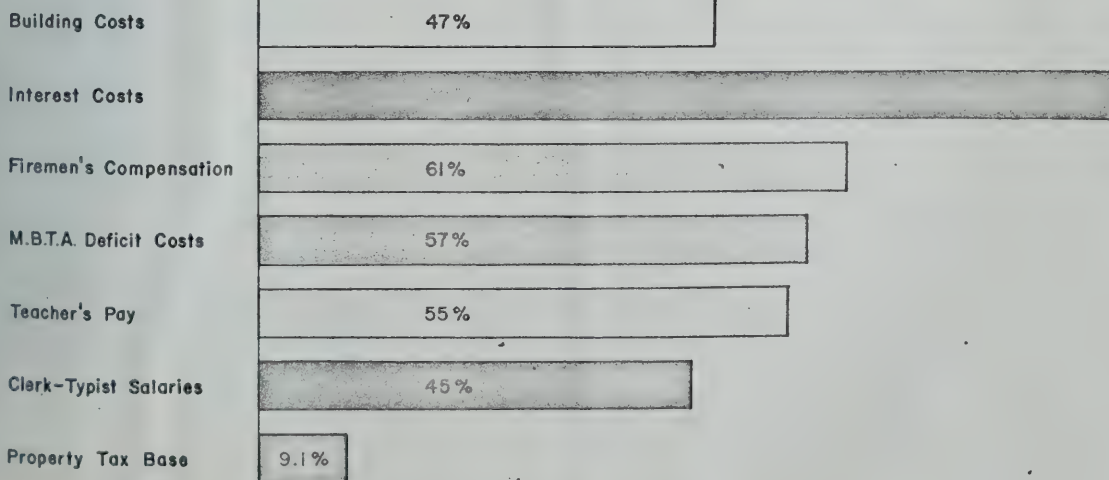




The tax base of the city has risen by 1 percent per year since 1960. This is well below the 5 - 10 percent annual increase in such expenditures as interest payments, teachers' pay, MBTA needs, and so forth. In addition, Boston has 52 percent of its property (by value) in the tax-exempt category, compared with Baltimore - 23 percent; Denver - 24 percent; Philadelphia - 25 percent; and St. Louis - 30 percent.

## TAX BASE HAD COMPARATIVELY SLOWER RATE OF GROWTH 1960-69

PERCENT INCREASE 1960-69



SOURCE: Department of Administrative Services, City of Boston, 1969



#### D. Secular Problems

The recession of the past few years has hit many Boston firms.

The drop in demand and the inflation in costs have driven some firms out of business or out of the area. (e.g. Whiting Milk, Allis Chalmers). The ecology movement has caused difficulties for many other firms. In the absence of a growing, booming manufacturing sector, which would hire many now unemployed persons regardless of their training, Boston must resort to manpower training programs to train the unemployed for those jobs that are available. However, recent changes in federal policy have resulted in a 50% cutback in Boston's manpower funds and programs.

Therefore Boston must do everything possible to attract and keep manufacturing firms in Boston to provide jobs for its residents.





## E. Strategy for economic development

In view of the conditions described above, we have decided to focus our development efforts on keeping and augmenting Boston's industrial base. Such a program has been on-going and began in mid-1969 when a federal E.D.A. grant to the Economic Development and Industrial Commission (EDIC) permitted the city to conduct an extensive study of the benefits of each sector in the economy. EDIC concluded that manufacturing was the best sector for the main thrust of an economic program in Boston. Its average wage levels were among the highest. Its employment rolls were among the largest. It had a relative high propensity to hire city residents.

Entry levels into its relatively long career ladders were sufficiently low for the non-college educated portion of the labor force. Its employment levels had been steadily declining in the post-war period while employment in most other sectors offering lower wages was increasing.

Relative to other sectors manufacturing had substantial export benefits for the local economy and revitalization of this sector would have a more dispersed or neighborhood effect as opposed to the downtown only orientation that services implied. Finally, as indicated by a special survey, manufacturing basically wanted to stay in Boston but was leaving the city because land for expansion or consolidation was not readily available. In light of the value of the sector, this, it seemed to EDIC, was a manageable problem that Boston could and should try to resolve.



After the Boston EDIC determined that the manufacturing sector would be an appropriate area for further research, it conducted the previously mentioned industrial survey. Similar to the efforts undertaken in New York City, EDIC's survey involved more than half of Boston's 600 manufacturers with 20 or more employees. It covered 39,000 of the 70,000 employees in manufacturing, and it generated detailed data on wages, minority participation, freight movements, geographical distribution of raw materials and sales, assessment of city services and relocation of expansion plans.

Manufacturing relates specifically to the "grey area" problem of cities. The nature of these areas is that they are as much underutilized industrially as they are deteriorating residentially. Both the cause and cure of this situation is tied in part to the health and growth of firms which occupy these grey area sites. Aid to certain sectors--finance, insurance and real estate and mush retail--would have a predominant impact only on the downtown areas. Aid to manufacturing would have a dispersed effect throughout the city, but especially in peripheral areas.

Further, more than most other forms of economic activity, manufacturing "exports" its output. The money imported from outside the local economy is paid out in the form of wages, salaries and tax dollars. This feature can be contrasted with many retail and service facilities that simply recirculate money contained within the local economy.

Some may argue that central cities are not efficient locations for manufacturing. However, it may come as a surprise that core area manufacturing plants are not as inherently inefficient as some believe. It has been hypothesized that city's plants, being older, are less efficient than the newer suburban layouts. Therefore, the





argument goes, in times of a recession the less productive city plants are the first to layoff and the last to rehire. Plausible as this seems, there is some evidence suggesting that, at least for the city of Boston, the above is wholly incorrect.

According to a recent and detailed study of the local economy manufacturing productivity per worker is higher in the City of Boston than in the suburbs and payroll per worker in Boston is lower and rising more slowly. Consequently, profit per worker is higher and growing faster in the City of Boston. As an added bonus, the composition of manufacturing activity in the City also argues for a superior performance relative to the suburbs in times of a recession.

Boston's industrial mix is heavily weighted in the non-defense non-durables with minor participation by the slow growth textile and shoe industries. The suburban ring around Boston has been hurt more by the recession because its industrial mix is oriented toward aerospace and defense goods, interest rate-sensitive durables and R & D type activities.

In attracting new firms, the city is prepared to exercise some constructive selectivity and has done so in the past.

With the focus on manufacturing, Boston hopes to take advantage of the high rate of industrial mobility by selectively retaining and recruiting firms with city aid. This "sifting process" would result in the continual upgrading of Boston's industrial mix. An evaluation of job benefits would be done individually, allowing each firm to compete for city aid in terms of its qualities. The city would not penalize any firm, but it would help only the best firms. A benefit equation to judge the relative qualities per square foot of any firm has



been developed and can be utilized as soon as the city decides what emphasis it wants to give to different variables. This equation permits the comparison of employment quality between Boston and metropolitan firms, between those wanting to leave and those staying in Boston and between those Boston firms seeking expansion space and those out of town firms thinking of relocating to Boston.

The form of the equation is as follows:

$$S = [(a_1 E + a_2 \text{MGW} + a_3 \text{MGW5} + a_4 \text{PTE} - a_7 I) \cdot (1 + a_5 \text{GE}) \cdot (1 - a_6 C) \cdot (W - \text{LW})] / A$$

Diagram illustrating the variables and coefficients in the equation:

- $a_1$ : Coefficient Which Weights the Importance of Each Variable
- $E$ : Total Full-Time Employment
- $a_2$ : Coefficient Which Weights the Importance of Each Variable
- $\text{MGW}$ : Number of Minority Group Workers
- $a_3$ : Coefficient Which Weights the Importance of Each Variable
- $\text{MGW5}$ : Number of Minority Group Workers Earning \$5,000 plus
- $a_4$ : Coefficient Which Weights the Importance of Each Variable
- $\text{PTE}$ : Part-Time Employment
- $a_7$ : Coefficient Which Weights the Importance of Each Variable
- $I$ : Seasonal Fluctuation In Firm's Employment
- $a_5$ : Coefficient Which Weights the Importance of Each Variable
- $\text{GE}$ : Adjustment for Growth Potential
- $a_6$ : Coefficient Which Weights the Importance of Each Variable
- $C$ : Cyclical Instability
- $W$ : Average Wage of Firm
- $\text{LW}$ : Some Pre-determined "Living Wage"
- $A$ : Firm's Square Footage

"S" is the firm's score, which is calculated from the variables that express its individual characteristics and from the coefficients ( $a_1$ ,  $a_2$ , etc.) that weight the variables according to their relative importance.





- E is full-time employment, including all hourly and salaried personnel who work a full business week. If employment is seasonal, E is the average of the four calendar quarters.
- C is an index that reflects the cyclical instability of the firm's industrial type. The index runs from 1 to 5 with increasing instability and was calculated from the industry's performance nationally over the last 20 years according to U. S. Commerce Department records.
- W is the average yearly wage paid by the firm.
- LW is a figure for the minimum living wage, so that  $W-LW$  is the amount that the average wage exceeds or falls short of the minimum. LW is a set figure that remains the same for all firms.
- I is a measure of the firm's seasonal employment instability. For firms having seasonal employment, I is the standard deviation of the 4 calendar year quarters' employment from their mean. For firms not experiencing seasonal employment, I is zero.
- A is the floor space area used by the plant. Since space has been seen to be a prime constraint for Boston's industry, it is important that the firm's beneficial characteristics be balanced by a measure of how much of this scarce resource the firm requires.



## F. Economic Overview of the South Boston Area

The 167 acres of a Naval Annex land in South Boston comprises almost half of the 400 acre industrially zoned South Boston area. This entire industrial tract has undergone significant changes over the last few years. Both the shipping and the rail facilities have declined or disappeared in large part, and in addition to the Navy land some 40 to 50 acres of Port Authority land is held off the tax roles. In sum, the low density of land; the tax exempt nature of much of the land; and the location of this land within the central city should be viewed has an opportunity for future development. Survey of manufacturing firms in 1969 determined that there was a great deal of demand on the part of industry for industrial land in Boston. However, in view of the small amounts of large unencumbered parcels of vacant land many firms were leaving the city for suburban zones.

Clearly then, the characteristics of the South Boston industrial area lend themselves to resolving the structural problems of the Boston economy as a whole. The tax base could be improved by taking what is now tax exempt land and turning it into tax productive land. The need for manufacturing development could be provided for at the same time. The fact that the land is now vacant and assessed at low value indicates that is is still appropriate to be used for manufacturing purposes.

While recreational and housing uses may be appropriate in the Charlestown facility, such uses do not appear to be socially economically efficient in South Boston. For one thing, the area in question is entirely zoned for heavy industry, for another thing,





the area itself is directly in the flight path of the airport in East Boston. One of the major reasons for the South Boston Naval facility being ideal for industrial development is the superb access of this general location. It has excellent access to regional highways leading north, south, and west; it is moments from downtown Boston; the airport is 10 or 15 minutes away; it is serviced by both port and rail facilities.

Further many of the uses in other parts of the South Boston area will become non-industrial in the future, the 33 acres of British properties, and the acreage now held by Anthony Athanas together amounting to about 80 acres is planned for housing and commercial uses. The unavoidable consequences of this trend will be a diminution of available industrial land in Boston. It appears then that this loss of industrial land can be compensated for by the productive use of the South Boston Naval Annex. Finally, the City of Boston does have the development tools necessary for industrial development.

To develop multi story industrial space in Boston Mayor White has successfully petitioned the State Legislature to create a quasi-public development corporation.

The Boston Economic Development and Industrial Corporation has the power of eminent domain, access to general obligation bonds to the City, its own set of revenue bonds, special corporation notes and debentures for project costs and operating capital. It is mandated to work in industrially zoned areas of the city, it must seek the approval of the Mayor and the City Council before it assembles industrial land. Finally, it may sell or lease the land once acquired and it may develop the property for sale or lease.

T-1-14



Importantly it can deal with private developers as well as manufacturing concerns and it does expect to pay brokerage commissions. In short the Corporation is responsive to the needs of the city, it has all the flexibility necessary to develop large and complicated parcels of land, it is established to work with the private community and its sole purpose is job generation through industrial development.

The Corporation Board of Directors are seven private leaders appointed by Mayor White from community, industry, finance, real estate, and municipal affairs. Since the corporation has only existed since February and since the board was appointed only last June, there have been no projects as yet, however, there is some ambiguous hopes for Boston to the use of this vehicle. In an effort to demonstrate the feasibility of financing industrial development in the city, appendix discusses several avenues for financing and evaluates the trade off involved as between costs, market ability and job generation





PART I

2. THE LABOR MARKET OF THE CITY OF BOSTON.



## 2. THE LABOR MARKET OF THE CITY OF BOSTON

Recent Department of Defense cutbacks will accentuate the unemployment problems in the Boston area. Of immediate concern is the announced closing of the Boston Naval Shipyard resulting in a loss of 5,000 jobs, many of which are not directly transferrable into the local private industry. The Division of Employment Security is currently planning emergency efforts to ease the transition, the success or failure of which will significantly affect the local market.

Efforts to develop the surplus sites as industrial locations could ease the medium and long run effects of the closings.

All the members of the work force of the Shipyard do not reside in the Boston Manpower Area Planning Council (MAPC) area\* but most live within the Boston SMSA. It is hoped that the joint efforts of the City and State agencies will result in a softening of the economic blow dealt by the shutdown.

The decade of the 60's was marked by some radical changes in industrial structure in the Boston SMSA. (It is best to disregard 1970 figures in deciphering long range trends because they reflect the recent economic slowdown.)

For the period 1960-69, total employment has moved steadily upward. Looking at manufacturing employment, however, there is no indication of any long-range growth, but simply year-to-year fluctuations around a steady average. Any annual rise in manufacturing employment is completely attributable to durable goods industries, since non-durable goods show a steady downward trend with a loss of approximately 19,000 jobs between 1960 and 1969.

---

\*Suffolk County and Brookline J-2-1





Particularly noticeable declines in non-durable employment were in the leather, food, apparel, and rubber industries. Food, apparel, and leather were respectively the first, second, and fourth largest employing industries of the non-durable category in 1960. Each of these industries lost jobs from 1960 to 1969 - 5,200 in food; 5,300 in apparel; and 6,500 in leather.

Although not as dramatic, textiles and chemicals also experienced declines in employment over the period. Employment in paper and printing did not show any significant downward movement, but remained fairly constant from 1960 to 1969.

The years 1966 to 1969 were notably a time of nationwide economic expansion. Looking at all manufacturing industries, both durable and non-durable, in most cases, employment either fell or remained constant over this period. With the civilian work force in the Boston SMSA increasing by 81,000 workers from 1966 to 1969, manufacturing industries clearly employed a declining proportion of the labor force, even when the economy experienced rapid expansion.

The structural change in industry is even more evident from the employment figures for the non-manufacturing industries. The number of jobs in this sector increased from 771,000 in 1960 to 985,200 in 1969. All industries showed increases except for construction, where employment remained about constant over the decade. The most significant growth was in the category of "service, miscellaneous, and mining" where employment expanded from 201,200 in 1960 to 309,600 in 1969, an increase of more than 50%.

Overall, it may be said that the non-manufacturing industries, and particularly the service industry, have exhibited the greatest capacity to absorb new members of labor force and those displaced



from declining industries. Employment in manufacturing had not expanded during the 60's and therefore has diminished as a proportion of the total. Among manufacturing industries, those producing non-durables showed the poorest employment record with a steady downward trend over the period.

The City of Boston economy underwent an extraordinary transformation in the same period. Formerly a center of trade and manufacturing, Boston is now a producer of high-grade services - finance and insurance, medical services, higher education, recreation and tourism, business services, personal services, and government. To complement this change in the structure of the local economy, there was a notable upgrading of the labor force of the City.

The local economy has undergone significant changes in the past ten years. While the trade and manufacturing sectors accounted for 41.7% of the 501,000 jobs in Boston in 1960, these two industries accounted for only 33.0% of the City's 529,000 jobs in 1970. This is a decrease in jobs of 29,600 from 208,900 to 179,300, a decrease of 14.2%.

Substantial growth has occurred in the finance, insurance, real estate, and service industries. In 1960, these industries employed 136,800 people. This represents a growth of 46,800 jobs, an increase of 34.2%, and has more than offset the trade and manufacturing declines.

The shift from manufacturing and trade to the higher grade service industries has necessitated an upgrading of the resident labor force of the City. In 1960, 34.7% of the resident labor force had high school degrees. In 1970, 48.5% of the labor force were high school graduates. The number of workers with college





degrees has increased 59% since 1960, from 9.8% of the labor force to 15.6%.

Many of the higher level jobs in the service industries are held by commuters, not MAPC area residents. In 1960, 250,000 jobs of the total 501,000 were held by residents of Boston. By 1970, the majority of the people working in Boston were not residents of Boston. Commuters held 64% of the jobs in the area.

At the present time, the service industry is the largest single sector of the local economy. The jobs in this industry are predominantly professional and clerical positions.

Unemployment is currently estimated at 27,500 or 8.2% of the MAPC resident labor force. The local unemployment rate has remained consistently above the national average, and will continue to do so because of the reasons for that unemployment. The Boston economy has undergone tremendous structural changes, and is projected to change even more, while the labor force has not changed quite as rapidly.

Boston's unemployment problem is not due to a sluggish local economy. The population and resident labor force of the area decreased from 1960 to 1970. And while the local economy is projected to grow by 20% in the next decade and population is expected to remain at its 1970 level, there will be serious unemployment problems. The resident labor force will not benefit from the growth in the number of jobs because they do not have the skills to fill those jobs. These jobs will continue to go to commuters unless the resident labor force receives intensive upgrading.

The nature of Boston's unemployment demands training the labor force to meet the demands of the labor market. There are currently thousands of job vacancies listed on the Job Bank, and



thousands listed elsewhere. The DES estimates 85,000 unemployed people in the SMSA. It cannot be denied that unemployment is high. Nor can it be denied that there are many job vacancies. If there were perfect matching of the labor supply to the demand expressed by industry, there would be considerably fewer people unemployed in the SMSA.

The need for education and training goes beyond the unemployed. There are also several thousand people in the Boston MAPC who have dropped out of the labor force. These people were discouraged after being unable to find work. They have stopped actively looking for work and thus, by definition, are no longer members of the labor force. Since one must be a member of the "labor force" to be "unemployed" or "employed," the unemployed figures hide these people. These are the "hidden unemployed."

Of these people who are not in the labor force, but would like to work, more stopped actively seeking work because they felt they lacked the training and education needed than because they could not find work.

The need for manpower programs, for education and relevant training is clear. The manpower programs in Boston provide these remedial services to disadvantaged people in the area. But the manpower programs are remedial. The real need for effective education and relevant training is in the schools, particularly at the secondary level. If the education system were more responsive to current and future labor market trends, then the dollars spent wisely in education would result in fewer remedial efforts.

There is an increasing need for job training, both institutional, and on the job, and for increased manpower funds. But manpower programs alone, or even coupled with aggressive monetary-fiscal policies,





will not, in the long run, solve the unemployment problems we face, unless there is an educational system that can respond to the changing nature of work and of jobs. .

The reuse plan for the bases must take these considerations into account. An integrated state/local relocation program must be designed. But more important in the long run, the reuse marketing strategies for the bases must recruit industry with jobs compatible with local needs.



Part I

3. The Port of Boston





The port of Boston is defined as the expanse of water and waterfront facilities in the inner harbor northwest of Castle Island point composed of East Boston, Chelsea, and Everett on one side, and South Boston, Boston Proper, and Charlestown on the other side.

- A. Channels and Anchorages - The port of Boston is served by three principal entrance channels, namely: Broad Sound, North Channel 1500' wide, 35' deep MLW, 900 feet of which are dredged to 40' depth at MLW; Broad South Channel 1200' wide, 40' deep MLW; and Narrows Channel 100' wide, 27' deep MLW.

The President's Roads leading into the inner harbor are 6,000' long, 2,000' wide, with a minimum depth of 30' MLW. Nantasket Roads 5,000' long and 2,000' wide, with a 30' MLW depth, provide safe anchorage.

The inner harbor extension of the President's Roads, called the Main Ship Channel, is 600-1200' wide and has a depth of 35' which goes beyond the Charlestown Naval Shipyard. Another 600' wide channel, 40' deep, forks in a southerly direction from the main channel. As a result, the main segments of the port are capable of accommodating ships of 20,000-50,000 ton displacement.

The piers are located from five to seven miles from the open ocean on a waterway free of such impediments as drawbridges, except in the case of Chelsea piers to which access is via a drawbridge. Large rail holding yards are located adjacent to all main waterfront and some other piers.



B. Terminals - There are 259 piers or wharves in the port of Boston of which 156 are usable. They provide 158,646 lineal feet or 30 miles of berthing space measured along the sides and ends of piers and along bulkheads or shore wharves. Many of them have railroad connections. The depths of water available alongside these terminals range up to a maximum of 40 feet at MLW. Practically all of the terminals fronting on the main ship channel are in close proximity to storage warehouses, including cold and dry, which greatly facilitates the transfer of cargo between vessels and warehouses.

The piers of Boston Harbor fall naturally into three groups; those served by the Penn Central Railroad in South Boston; the Boston and Maine Railroad's, situated at the upper end of the inner harbor at Charlestown; and those of the Penn Central Railroad (Boston and Albany District) across the harbor at East Boston.

All of the principal piers have track connections and facilities for direct transfer of cargo between cars and vessels and motor truck service to all parts of New England, the Midwest, and Canada.

Investment in seaport facilities is steadily increasing from \$5 million in 1966 to about \$7.2 million in 1971. Port facility utilization, though, is steadily declining.

Special facilities available in the port of Boston are provided for:

Containerized Cargos - 3 container cranes plus associated yards and equipment.





- . Liquid Sulphur - 10,000 ton heated tanks.
- . Coal and dry chemicals - conveyor belt system 1700' long, rate 1000 tons/hour. Material is piled by belt stackers moving on rails.
- . Cement - off-loading plant 800 tons/hour.

### History and Recent Developments

Boston's Port once formed the basis of the city's economy and had an extensive, heavily industrialized hinterland that extended throughout northern New England. Boston's location as the closest U. S. Port to Europe and the early development of railroads in the area resulted in periods of rapid growth in the harbor's facilities and traffic. At its peak Boston provided over 30 linear miles of pier and wharf space. These piers were served by several extensive rail yards located in the very heart of the city. More recent history has seen decline in ship traffic. Large manufacturer-shippers and importer-receivers have moved their activities from the area, which is now primarily occupied in the production of high value, low volume products. This has reduced dependence of the regional economy on the port. In addition, other eastern U. S. ports have been able to attract a large proportion of New England regional cargo flow by providing more economic, more frequent, or speedier service.

Boston's port break-bulk cargo activities have declined drastically in recent years as a result of high cost, low productivity of the dock labor force, pilferage, loss of cargo, high port charges, infrequent service, long transit time, obsolete physical facilities for consolidating



and handling cargo and accommodating carrier vessels, changes in the structure of the economy unfavorable to the commodities and industries which have traditionally used the port, and changes in the location and technology of industries traditionally using Boston.

Petroleum products make up the largest volume of all Port of Boston traffic. Petroleum is the only major cargo commodity to increase steadily over the past ten years. On the average it comprises more than 90 percent of the total commodity flow in the port. The general cargo export trade has all but vanished; general cargo import trade is diminishing; and Boston's once dominant share in grain movements has apparently been lost to Baltimore and other ports.

#### Future Requirements

In the years ahead, the situation of the port is likely to worsen, though for different reasons than its decline during the last few decades. New transportation technologies favor large ports such as New York over medium size ports. Boston may find it difficult to attract the volume of business sufficient to enable it to offer the kind of services and rates offered by the port of New York.

The maritime transportation industry is developing capital-intensive operations--completely unitized, containerized or special bulk carrier vessels, automated handling equipment, and, generally, larger ships.

Technological developments in shipping indicate that to be successful in the future a port must offer docking facilities for deep draft vessels





(drawing up to 42 feet), easily accessible for ships and land transportation, with efficient, automated unloading facilities and good security, and a minimum of labor problems. Throughout the 1970's and 1980's, an increasing number of ships will not even be able to use existing Boston facilities because of their size. In addition, the port currently lacks repair facilities for larger size ships it will have to service if it is to remain competitive.



## Part I

### 4 Current Zoning and Land Uses





## Current Zoning and Land Uses

Both the Charlestown Naval Shipyard and South Boston Naval Annex are major military installations within the heart of the City of Boston. Both installations are immediately adjacent to a wide range of land uses, and their influence on these land uses and visa-versa is important to future reuse of these sites.

### A. South Boston Naval Annex:

#### Land Use

The land uses around the South Boston Annex contain a variety of industrial and commercial uses. West from the base along Northern Avenue is marine oriented with two major activities including the wholesale/retail fish pier and the Commonwealth Pier (both owned by Mass Port) complex which is used for both passenger vessels (mainly cruise ships) and more recently convention and exposition uses. Along Northern Avenue there are a number of smaller wholesale, retail and industrial uses a number of which are waterfront oriented. In addition there are two major sea food restaurants. A major area of the land immediately to the west of the base and formally used by the Penn Central Railroad as a switch yard, is now used by the Massachusetts Port Authority for new car storage, parking for the convention center, and other open air activities. Surrounding this site is wholesale/retail/warehousing area, primarily along Summer Street. To the west of the base near the Fargo building is a wholesale/warehousing area. South of Summer Street behind the naval reservation area is an industrial park with a wide mix of activities especially industrial and wholesale.



The land uses across the Reserved Channel from the former army base include heavy industry, and oil storage, and a major Boston Edison electric generating Plant at Summer Street. Immediately to the east is a Massachusetts Bay Transportation Authority (MBTA) generating station and former coal yard, (now used for salt storage) and further east a major fuel oil storage and shipment facility. The Massachusetts Port Authority facility at Castle Island makes up the rest of the property on the south side of the channel. This facility is primarily oriented towards container loading and unloading, with some conventional cargo piers.

### Zoning

Most of the Waterfront area is zoned for waterfront industrial (W-2) uses. Included in the W-2 area is the Naval Annex and Army base, the south side of the reserved channel area and the area to the west of the base along the Northern Avenue Waterfront.

There is a small area around the Fargo building and immediately adjacent buildings is presently zoned for manufacturing (M-4).

The open site formally occupied by the Penn Central Railroad between Northern and Summer Streets and the immediately adjacent area is zoned industrial (I-2), as is the majority of the area to the south of Summer Street.

The most restrictive of the industrial and manufacturing designations is the manufacturing (M) zone, such as the Fargo building and adjacent properties. This designation restricts uses to office, retail, and wholesale trade, service, institutional, and research activities as well as ancillary activities such as parking, transportation uses. The industrial designation (I) allows all the manufacturing activities mentioned above but also permits





heavy and/or noxious industrial uses. The third major zoning category within the industrial grouping is the Waterfront Industrial (W). This classification permits all of those activities allowed under the manufacturing and industrial designations, but only waterfront transportation facilities or other water oriented uses are permitted. Non water orientated manufacturing and industrial uses are conditional uses, which must be approved by the Zoning Appeals Board after review by the BRA serving as the City's Planning Agency.

B. Charlestown Naval Shipyard:

Land Use

Charlestown Naval Shipyard is situated at the eastern most end of the peninsula that forms Charlestown. There are only a limited number of uses directly adjacent to the shipyard. The southeastern edge of the shipyard is Boston Harbor. The northern edge is the Little Mystic Channel. On the northeastern edge the Tobin bridge separates the Charlestown community from direct contact with the shipyard. A Mass Port owned general cargo pier borders the shipyard to the southwest.

Along the northern portions of the bridge right-of-way and immediately to the west is the Charlestown Public Housing Project. Further north is the more recently completed Charles Newtowne moderate income housing. A small city park, Barry Playground, separates the Charles Newtowne from the Bridge area. The Little Mystic Channel on the northern edge of the shipyard contains a small yacht club and a public boat launching ramp. Across the Channel is the Massport container



facilities (two cranes), supporting railroad yards, a scrap iron storage and loading dock and a portion of the river bank. In the future the edge of the Little Mystic will be developed for recreation and open space.

In the vicinity of Charlestown's City Square is a low quality mixed retail commercial area of primarily two to four story buildings with many vacancies. A pleasant residential area with many historic houses is located on the Charlestown side of the Bridge across from the southern end of the shipyard. This community is an Urban Renewal area and is being improved through rehabilitation loans and grants and new city infrastructure.

Less than 2000 feet across Boston Harbor from the Charlestown Naval Shipyard are both the North End of Boston and the East Boston communities. The land uses and zoning of these two areas must be taken into account when analyzing the shipyard. At the present time the North End waterfront is being converted into a major outdoor recreational resource through construction of the North End Waterfront Park. This park will be extended along the harbor from the Charlestown bridge to the border of the Coast Guard station and inland to Commercial Avenue. Immediately across Commercial Avenue is a residential neighborhood with a mix of warehouse and retail/wholesale activity.

The Waterfront area of East Boston facing the shipyard is characterized by more traditional marine and water oriented activities with a mix of tugboat and other service craft berthing, marine repair facilities and a major marine electronics firm with its adjacent piers. There are also two significant vacant parcels along the waterfront which are designated for a park and a future housing development. Furthermore,



there is a proposal for a major Neighborhood Development Program (NDP) Project along the East Boston Waterfront that fronts on the shipyard that will include a planned development of the waterfront and adjacent blocks for primarily residential use.

### Zoning

At present the zoning regulations of those areas immediately adjacent to the Charlestown shipyard are quite diverse. The shipyard property itself is zoned for waterfront industrial uses as is a portion of the Massport property on the north side of the Little Mystic Channel. Land between the Tobin Bridge and the harbor is zoned for local business and the major portion of Charlestown residential area is zoned H-1 (apartments or houses with a floor area ratio (FAR) of 1 or less.) The City Square section of Charlestown is zoned business (B-1). Immediately adjacent to the base and up the Charles River shore line on the Charlestown side is zoned industrial (I-2).





## C. Current Development Proposals in the Vicinity

### 1. South Boston Naval Annex

At the present time there are a number of developments and proposals changes that may have significant impact on the reuse of this property.

A number of transportation-oriented projects are under development or under consideration. Most significant of these is the current study underway to determine what future action will be taken with the Northern Avenue Bridge. This investigation is being undertaken by the Massachusetts Department of Public Works, with input from the BRA. The new and improved bridge, and subsequent improvements to Northern Avenue, will be most beneficial to future development, industrial, in the South Boston port area, including South Boston Naval Annex. Northern Avenue is in very poor condition and is a major transportation bottleneck in between the base and the City.

Also under study are the Congress Street and Summer Street Bridges. The Summer Street Bridge at present is in very poor condition. Proposals have been put forth to utilize an adjacent pile structure for commercial development at the time that the bridge is upgraded.

The Broadway Bridge is also in poor condition, and reconstruction, renovation, and realignment of the bridge are being studied to improve the traffic circulation in South Boston.

Proposed in conjunction with the reconstruction of the Broadway Bridge is a new limited access, divided service highway to run



north/south along the right-of-way of the Penn Central Railroad from Northern Avenue to West Second Street. This highway is to provide direct access from the South Boston industrial and port area to the Massachusetts Turnpike and the Expressway. A third, more long range, and less definite proposal but one which has been examined to some depth by the Boston Transportation Planning Review is the possibility of a Third Harbor Tunnel crossing. This proposal has been reviewed initially by the Governor with the recommendation for further study of a two-lane bus and truck tunnel utilizing the Fort Point Channel.

Proposed developments in South Boston that may have a significant impact on the naval annex include proposals by the Athanas Pier 4 Company regarding their holdings at the mouth of the Fort Point Channel. These proposals include a major hotel, condominium housing, restaurants, and in the more distant future additional housing, office space, and parking facilities. Time frame for the first stage of this proposal is from 1975 through 1981. On the Fort Point Channel in South Boston, Town and Cities Limited has proposed a mix of rehabilitation and new construction for commercial and industrial activity as well as several hundred units of housing in the more distant future. The time frame these proposals encompasses from 1975 through 1979. Further up the Channel, the Gillette Company has an indefinite proposal to modernize their plant.

The Massachusetts Port Authority has already moved with regard to their holding and operations in South Boston. In 1973 they made





alterations to Commonwealth Pier to provide for general convention center and exposition uses, as well as passenger ship facilities. Furthermore the Authority has proposed improvements and alterations to the Fish Pier to attract tourists and conventions. In the more distant future Mass Port has proposed a parking facility and garment trade center in the vicinity of Northern Avenue and Summer Street. The Boston Economic Development and Industrial Commission (EDIC) has tentative proposals for development of new industrial space in the area of Summer Street and the former Penn Central Railroad yards.



## 2. Charlestown Naval Shipyard

Charlestown is a dense, compact community undergoing intensive redevelopment and rehabilitation. A number of proposals and suggestions under consideration by Boston Redevelopment Authority, State Department of Public Works, Massachusetts Port Authority could have immediate and long lasting effect on any reuses of the shipyard site.

The most important study is the North Terminal Area Environmental Impact Study presently being conducted by Charles A. Maguire Associates for the State of Massachusetts Department of Public Works. This is concerned with the area bounded by the Tobin Bridge and Prison Point Bridge in Charlestown and Everett Circle and Causeway Street in Boston. This study will evaluate alternate circulation patterns, new access ramps to existing highways in the area, parking, abandonment and/or reconstruction of existing streets and roads.

Directly tied in with this study are a number of other ongoing and proposed developments in and around Charlestown which will to one degree or another change the character of the community, and effect any future developments. Those projects that are definitely known to be either under construction or committed to being funded include:

- . The new Charles River dam and bridge at Warren Avenue scheduled for construction next year. This project, which entails relocation of the boat locks to the mouth of the harbor and construction of a new road across them will



greatly enlarge the fresh water portion of the Charles River and provide improved access to and from Charlestown by automobile.

- . The Prison Point Bridge presently under construction will provide improved and direct vehicular access between Charlestown and Cambridge across the Boston and Main Railroad yards. This project is scheduled for completion in the fall of 1973.
- . Improvements to the Orange Line of the MBTA subway are presently under construction and include continuation underground from the present terminus of the subway near North Station and Haymarket under the Charles River and a combination of subsurface and at-grade track skirting Charlestown. These improvements will permit the removal of the existing elevated structure on Main Street in Charlestown. One immediate effect of this improvement will be that the nearest subway station will be significantly further from the south gate of the base than the present City Square station.
- . The new Bunker Hill community college is under construction in Charlestown and is expected to open in September of 1973 with 1200 students initially, growing to 5,000 students by 1975.



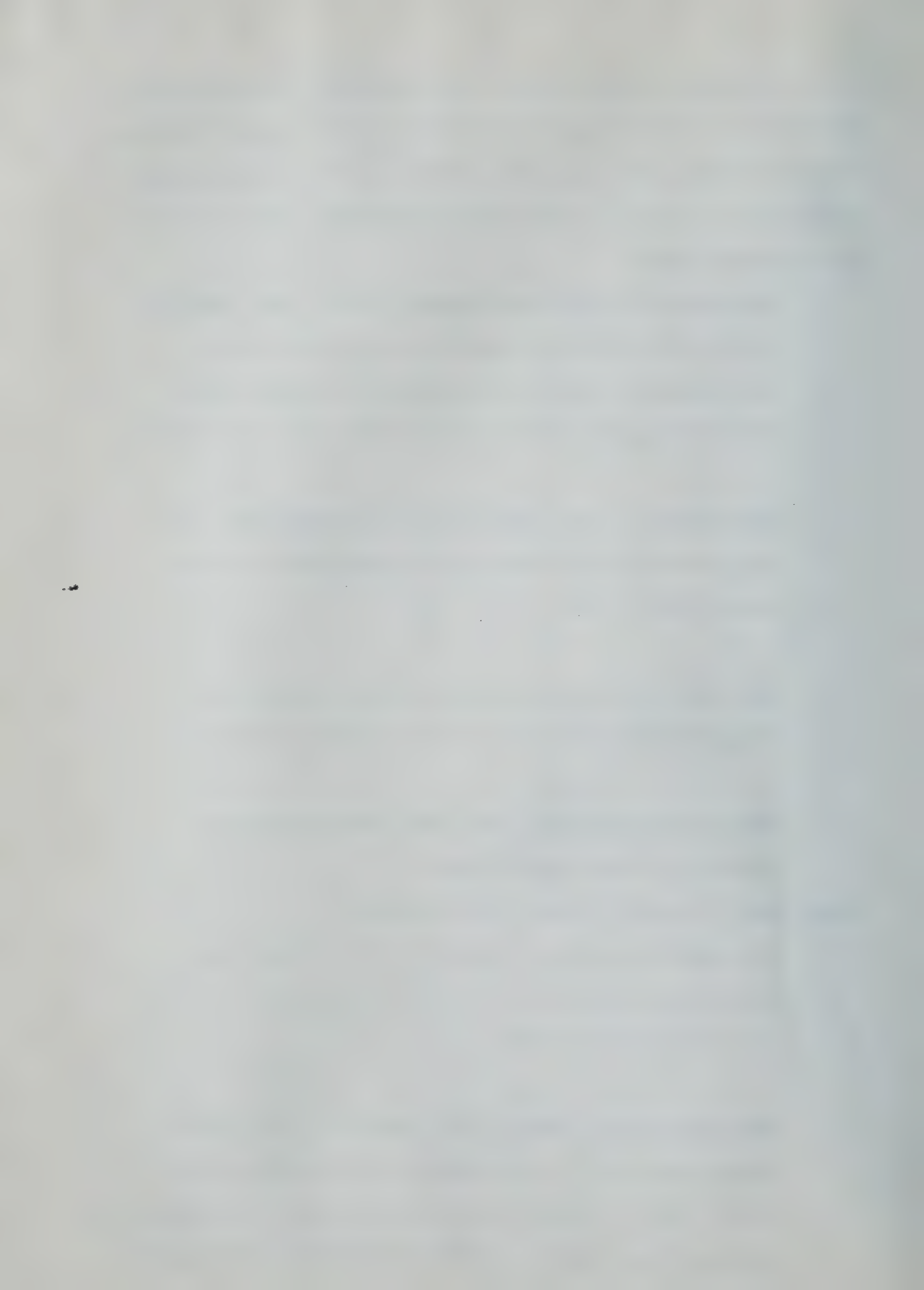


The BRA through its urban renewal program presently has an extensive, ongoing urban renewal project in Charlestown with a number of improvements and changes occurring in the community. The most significant and important of these as far as future development and naval base is concerned include:

- . Improvements of Rutherford Avenue presently under construction and scheduled for completion in the fall of 1973.  
Improvement of this road is intended to alleviate some of the traffic problems in and around City Square in Charlestown.
- . New housing is under construction at Mishawam Park. 337 new units of housing scheduled for substantial completion in the fall of 1973.
- . Improvement of Barry Playground, which is immediately adjacent to the Naval Base on the north edge of the base.
- . New open space and park area across along the northern edge of the Little Mystic Channel.

Other plans in the more distant future include:

- . The rehabilitation and improvement of Main Street once the elevated subway line is removed, tentatively scheduled for some time after 1975.
- . Rebuilding Chelsea Street Bridge across the Little Mystic Channel that would, in combination with new access ramps to the Tobin Bridge and Central Artery, provide substantially improved truck access to and from Charlestown and eliminate



a major problem of trucks presently going through Thompson and City Squares. This improvement, should it become reality, would significantly improve both truck and employee access to the northern half of the shipyard.

Other proposals now being reviewed at various levels by both City and State agencies include such things as a major new commuter parking structure near City Square, improvements and/or relocation of the Boston Edison Steam Generating Plant in the north terminal area, relocation and/or removal of the Green Line elevated structure, a Charles River Green belt, a private boat marina along the Charles, and a new Charlestown high school and accessory play fields and structures.





Part II  
The Facilities



## Part II

### 1. South Boston Naval Annex



## A. General Description

Physical Characteristics: The South Boston Naval Annex and former army terminal site consists of 239 acres of land and water that has been used by both the Navy and Army for ship repair, freight handling and personnel support activities. The majority of the land was formerly tidal flats and was filled over a number of years by the railroads and the City. At present the military property is comprised of two major parcels, divided roughly in half by Summer Street. The majority of the buildings owned by the Navy are on the parcel between Summer Street and Boston harbor.

Of the 239 acres of land and water controlled by the Navy in South Boston, 167 acres is flat filled land; in addition, there are 72 acres of piers and water rights associated with the property.

There are 12 major buildings suitable for industrial and/or warehouse use. The largest of these buildings has over 1.5 million square feet of floor space. The condition of these buildings is unknown at present. It is known they were constructed for heavy industrial/warehouse usage. There are 8 finger piers plus the army pier associated with the site, of various sizes and construction. Some are known to be of wood construction and may be in only marginal condition. Furthermore there are two drydocks, one of which is large enough to accommodate major ships; i.e., aircraft carriers or the largest commercial ship.

There is an existing power plant and service by the City water system which appears to be adequate. It is assumed there are





adequate utilities and services for normal industrial uses.

### Environment

The South Boston Naval complex is surrounded by industrial uses the majority of which are under the control of the Massachusetts Port Authority (Massport). Most important from an environmental standpoint is the White Oil terminal on the south side of the Reserved Channel which is a severe environmental blight.

A major portion of the naval property is in the flight path of one of the runways of Logan International Airport, one point within 2,000 feet of the end of the runway. The noise impact from Logan is quite substantial, and from preliminary investigations it appears the noise level exceeds HUD standards for federally financed housing.

The water quality in the vicinity of the South Boston facility is unknown but is assumed that it may be adequate for fishing. However, the Reserved Channel area can be assumed to be of a less satisfactory nature due to the proximity of the oil storage and loading facilities.

### Access

The South Boston naval facility is well located with regard to the central city and a major portion of Boston's manufacturing area. Access to the Turnpike and the Expressway is good, but local street conditions are in only fair condition. There are plans to improve



both Northern Avenue and construct a new north/south service road, which, if constructed, would greatly improve traffic flow and circulation. Logan International Airport with flights to the world's major cities is a short drive from the base.





PART II

2. Charlestown Naval Shipyard



## A. General Description of the Boston Naval Shipyard

### Location and Size

Situated at the foot of Breeds Hill and the Bunker Hill Monument, the Boston Naval Shipyard at Charlestown is a relatively flat piece of land created on mudflats between the Charles River and Mystic River estuaries. Its northwestern, landward edge is defined by the Mystic Bridge and ramp system separating the shipyard from the Charlestown residential community. By Navy records, the present area of the shipyard is approximately 130 acres, including 83.9 acres of "hard land" and 46.07 acres of piers and water area to the U. S. bulkhead line.

### Historical Significance

The Charlestown Navy Yard is of historical significance for its connection with the Revolutionary War, and the establishment of the U. S. Navy, its role in the building and maintenance of many important ships of the fleet, and for the firsts in Naval facilities and operations which occurred here.

The origins of the shipyard date to the spring of 1797, several months before the establishment of the U. S. Navy Department, when a resolve from the Naval Committee of the House of Representatives recommended that an appropriation be made for the establishment of a government dock-yard. Three years later, in the spring of 1800, Secretary of the Navy Benjamin Stoddard proposed the purchase of land at Boston for such a purpose. Later



that year, 43 acres of land and mudflats were purchased at Charlestown for a sum of \$39,214. Included in the site of the new shipyard was the land known as "Moulton's Point," where the British troops had landed and formed for the assault in the famous 1775 Battle of Bunker Hill.

Among the ships constructed at the Naval Yard in subsequent years were the "Independence," considered to be the "the finest and heaviest frigate-built vessel of her time," and the first torpedo boat the "Intrepid." One of the most famous ships constructed at the yard was the "Merrimac," converted into an ironclad by Confederate forces during the Civil War and known for its encounter with the Union Ironclad "Monitor" at Hampton Roads. For all but 40 years since 1803, when her hull was covered with copper made by Paul Revere, the famous frigate "Constitution" has made the Naval Yard her home.

The Charlestown Naval Shipyard has also been the site of several unique facilities. The first "shiphouse" for building ships indoors was constructed here in 1813 and proved so successful that it was copied in other shipyards in this country and abroad. Drydock #1, constructed in 1833, is one of the oldest drydocks in the country and was first occupied by the Constitution. The 1,360 foot long ropewalk produced all of the Navy's rope for over a century.





## Architectural Significance

The structures in the shipyard illustrate a variety of building types and several phases in the architectural stylistic development of the 19th and 20th centuries. They exhibit as well the increasing size and capacity of industrial structures permitted by changes in technology.

Notable structures in the shipyard include:

- 1) The Commandants House (1809) - a very fine three story brick mansion exhibiting Federal style features.
- 2) Drydock 1 (1827-33) - authorized by President Andrew Jackson, this is one of the two oldest drydocks in the country, both of which were completed in the same year. The Constitution was the first ship to enter the drydock and will be the last to do so under Naval auspices.
- 3) Wood-Metal Shop (#22) (1832) - This handsome granite multi-story structure may have been designed by Alexander Parris, Architect of the Quincy Market Complex in Boston.
- 4) Rope Walk (#58) (1834-36) - A unique granite structure 1,360 feet in length, the Rope Walk produced all of the Navy's rope for almost 135 years.
- 5) Buildings 24, 33, 34, 36, 38 (1837-1854) - multi-story granite structures of considerable architectural merit.

## Environmental Characteristics

### 1) Views

In its position at the head of Boston Harbor, the shipyard commands excellent views down the shipping lanes and across the inner harbor to the Boston Skyline. There are also views



which are not so favorable - towards a portion of the East Boston Waterfront and Massachusetts Port Authority piers. The Tobin Bridge is also an unpleasant visual obstacle for part of its length.

## 2) Relationship to the Water

Unlike Boston's downtown waterfront, there are no major structures on the finger piers which extend into the inner harbor at the Charlestown shipyard. The water itself cannot be seen at grade level from all parts of the shipyard. Water quality is fairly poor (Level C) but is adequate for recreational boating.

## 3) Noise

There is observable traffic noise from the Tobin Bridge, but the actual decibel levels have not been measured. The shipyard is just south of the flight path for Logan Airport. Projected air traffic noise levels at the Naval shipyard in 1975 are 105-110 EPNdB. This is equivalent to noise levels in downtown Boston and parts of Lynn, Winthrop and Chelsea.

## 4) Air Pollution

No information on either the levels or sources of air pollution affecting the site are currently available.

## 5) Vegetation

With the exception of trees and grass in the vicinity of the Commandants house and officers housing near Gates 1 and 3, the shipyard is devoid of vegetation.





## B. FACILITIES

### Buildings

The shipyard contains 86 buildings totalling approximately 3.5 million square feet of floor space. About 90% of this space is contained in 37 buildings having 10,000 or more square feet of floor space. Most of the structures are industrial facilities constructed during 5 periods of wartime activity. The principal building types are:

- 1) Granite bearing wall, 2 and 3 story buildings (1830-1855).
- 2) Brick bearing wall, loft-type buildings with high floor loading capacity (built ca. 1900).
- 3) 8-10 story brick and concrete structures with high floor loading capacity and wide column spacing (World War II).
- 4) Brick and concrete loft structures with very high floor loading capacity.

Although most of these structures are structurally sound and in good condition, many which are now used for industrial production have major deficiencies including inadequate elevators, lack of storage, lack of environmental controls and inefficient layouts.

### Waterfront Facilities

There are eleven piers at Charlestown, including two which are substantially filled land. Five of the eleven are wooden piers on wooden pilings and show varying degrees of deterioration. The principal limitations of the piers are that they are too short, too narrowly spaced and too limited in water depth to serve the newer types of ships both Naval and commercial.



There are three drydocks at the Charlestown shipyard. Drydock 1, completed in 1833, and Drydock 5 are both severely limited for future use of commercial ships because of their size. A marine railway and two shipbuilding ways are also located on the site.

#### Utilities and Services

A central power plant produces steam for electrical generation, heating and other purposes. However, the equipment producing more than half the kilowatt capacity of the plant is badly deteriorated, as is the electrical distribution system.

Compressed air and industrial oxygen are provided at the shipyard.

Street lighting on First Avenue between Gate 1 and 9th Street was recently installed and is in good condition. The rest of the shipyard has street lighting which is in good condition but may be of an inadequate illumination level.

Portable water is supplied by City of Boston water mains entering the yard at four locations. There are some problems of maintaining adequate pressure throughout the system and the true condition is not known.

### C. ACCESS

#### Highway

The Charlestown shipyard is located near the point of convergence of radial expressways serving a major portion of the region.

Route 95, the Central Artery and its connectors, and the Southeast



Expressway and Massachusetts Turnpike provide access directly north, south, and west. The last section of Route I-93, opened recently, completes the highway connection to the northwest.

Local access, which is currently circuitous and slow, will be improved as a result of improvements to Rutherford Avenue, and the construction of the Warren Avenue Dan and Bridge across the Charles River. Both projects are scheduled to be completed in 1976.

### Rail

Six miles of railroad track within the shipyard connect with a spur line of the Boston and Maine Railroad. The B & M provides direct freight service to Maine, New Hampshire, Vermont and New York and connects with the Penn Central Railroad in nearby Somerville.

### Water

Boston Harbor is one of the best natural harbors in the world with a ship channel 40 deep at mean low water, 1200 feet wide and unobstructed by bridges or ferry crossings. The shipyard is located approximately seven miles from open water. Maneuverability for large ships is somewhat limited in the vicinity of the shipyard.





## Mass Transit

The MBTA is currently in the process of replacing a portion of the Orange Line which serves Charlestown. When the new alignment is completed, the station closest to the shipyard will be within approximately 2/3 mile walking distance from the southernmost portion of the yard.

A surface bus route connecting Sullivan Square and Haymarket Square (near Government Center and Faneuil Hall Market) passes just outside the shipyard.



Part III  
Development Strategies





## 1. Overall Development Plan

It is essential that the development plans for Charlestown and South Boston be integrated and, in fact, controlled by an overall development plan and strategy. Together the facilities represent a substantial opportunity for increasing employment and improved land utilization in Boston.

If the appropriate "mix" of housing, historic preservation, industrial/light manufacturing, recreation, and commercial uses can be integrated with surrounding areas at these sites the City can turn a problem into an opportunity.

The challenge is to work with the Inter-agency Economic Adjustment Committee (IAEAC) to secure federal assistance as quickly as possible in order to design tentative and final development plans and action that are consistent with the unique history, needs and "personality" of Boston.

Parts I and II of this proposal discussed the history, needs and "personality" of Boston and the base facilities as they now exist. Part III addresses the issue of getting from here to the future.

The City of Boston assumes, together with the Commonwealth, the responsibility for carrying out an economic recovery plan. The Mayor, the Office of the Mayor, the Boston Redevelopment Authority (BRA), and the Economic Development and Industrial Corporation (EDIC) are united in marshalling resources for this effort. We invite the assistance of the IAEAC and have begun the job of community organization. Already underway is the job



of site review and appraisal and "market testing" for alternate use.

However, overall detailed economic development strategies (planning and policy formulation) must precede action.

As Chart I (page II-1-3) indicates, the first steps are to complete the physical facilities inventory (buildings and personal property) and a review of prior BRA, EDIC and other plans. Based upon these findings combined with new proposals from the community, developers, architects, planners, and preliminary market tests; a "tentative total development plan" can be established. Naturally, this total Plan will represent the integration of the separate Charlestown and South Boston plans (see section III parts 2 and 3).

Once a tentative total plan is formulated it must be tested. (This process we expect to happen between the 5th and 7th month). Each of the discrete parts of the two facilities plans and alternate plans must be individually and collectively tested for technical, financial, aesthetic, and community acceptability. The variety of proposals might range from historic preservation and museum uses to ship repair; from a mixed income housing plan to a free trade zone.

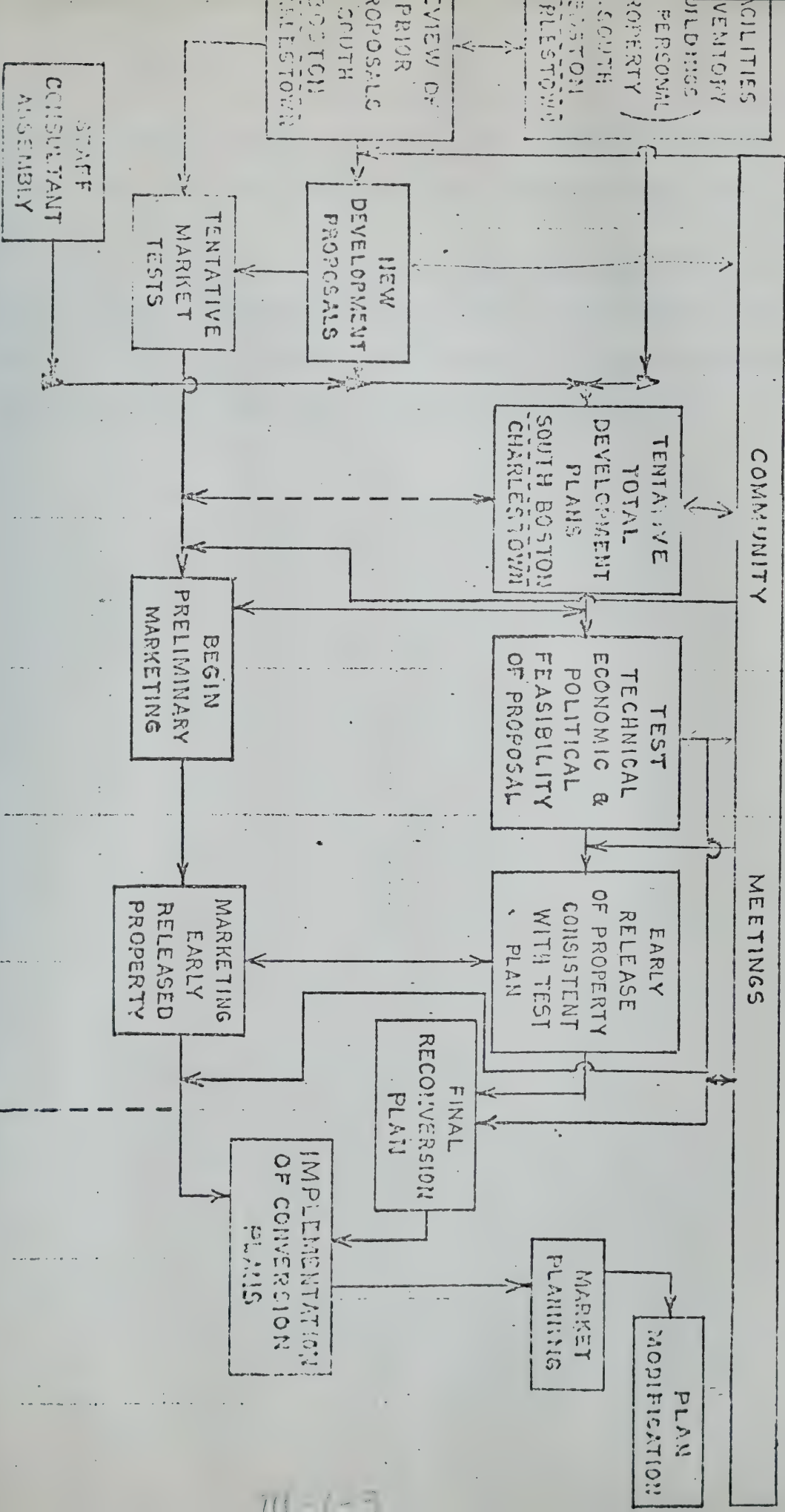
During the process of testing; community reaction, compatibility of master plan to overall City development plans, technical feasibility, financial feasibility, and compatibility with existing and planned infra structure resources must become the judgment criteria. However, to these criteria must be added consideration of the City's need to increase its housing stock, its attractiveness to tourists, (support for one of its leading industries), its port



# GENERAL PLAN SOUTH BOSTON/CHARLESTOWN DEVELOPMENT PLAN

DATE:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



PLANNING & POLICY FORMULATION

PHASE I

PHASE II

IMPLEMENTATION





activity and its blue collar employment base. Other considerations such as health needs, education needs, transportation systems and the like will be integrated into the tentative and final plan.

Once the community has determined the reuse potential of the sites an aggressive implementation plan must be developed and acted upon. The 10th and 11th month are reserved for developing this plan; the 11th through the 18th month are action months.

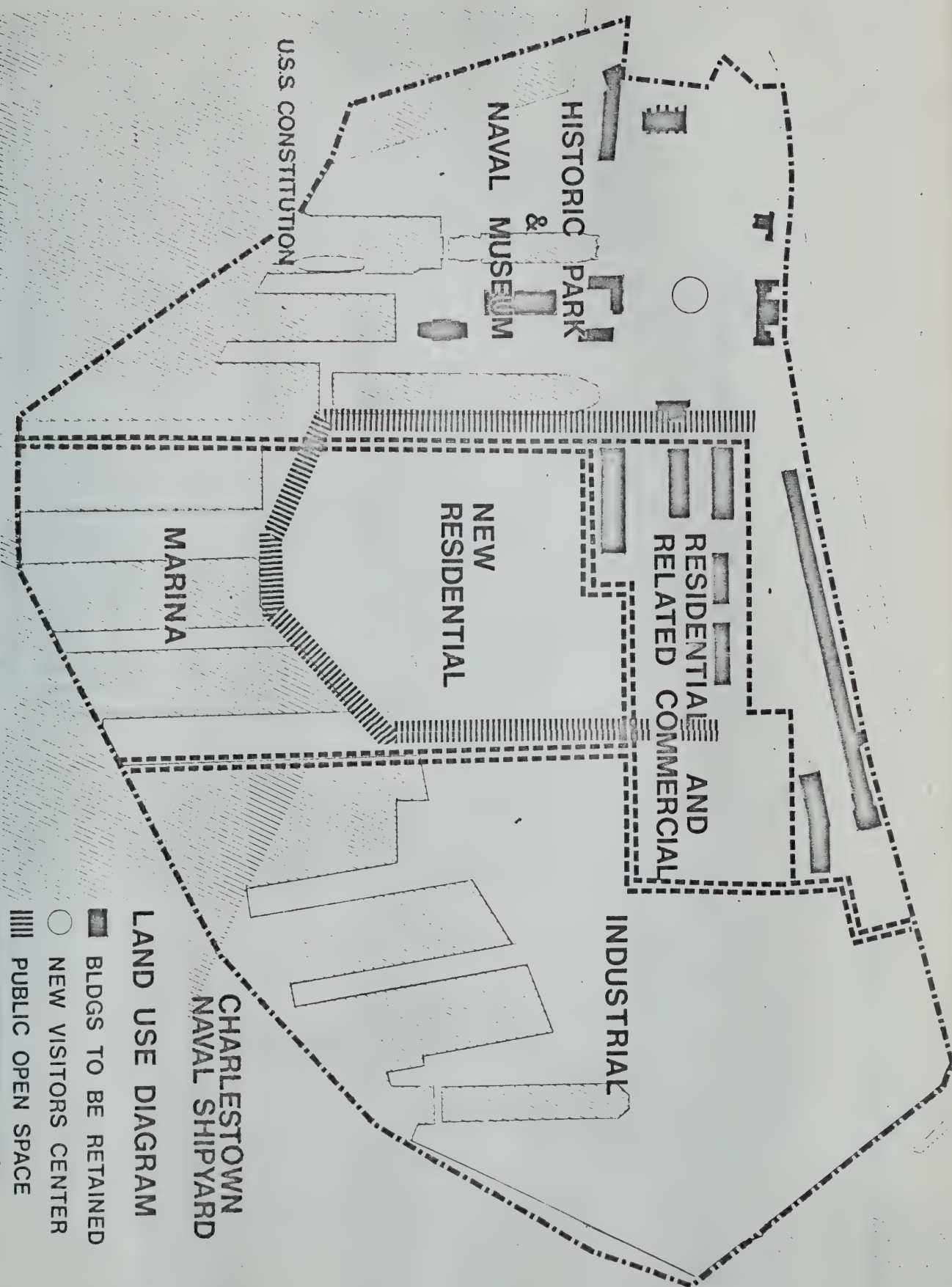


## PART III: DEVELOPMENT STRATEGIES

### 2. Charlestown







CHARLESTOWN  
NAVAL SHIPYARD

INDUSTRIAL

RESIDENTIAL AND  
RELATED COMMERCIAL

NEW  
RESIDENTIAL

HISTORIC PARK  
&  
NAVAL MUSEUM

U.S.S. CONSTITUTION

MARINA

LAND USE DIAGRAM

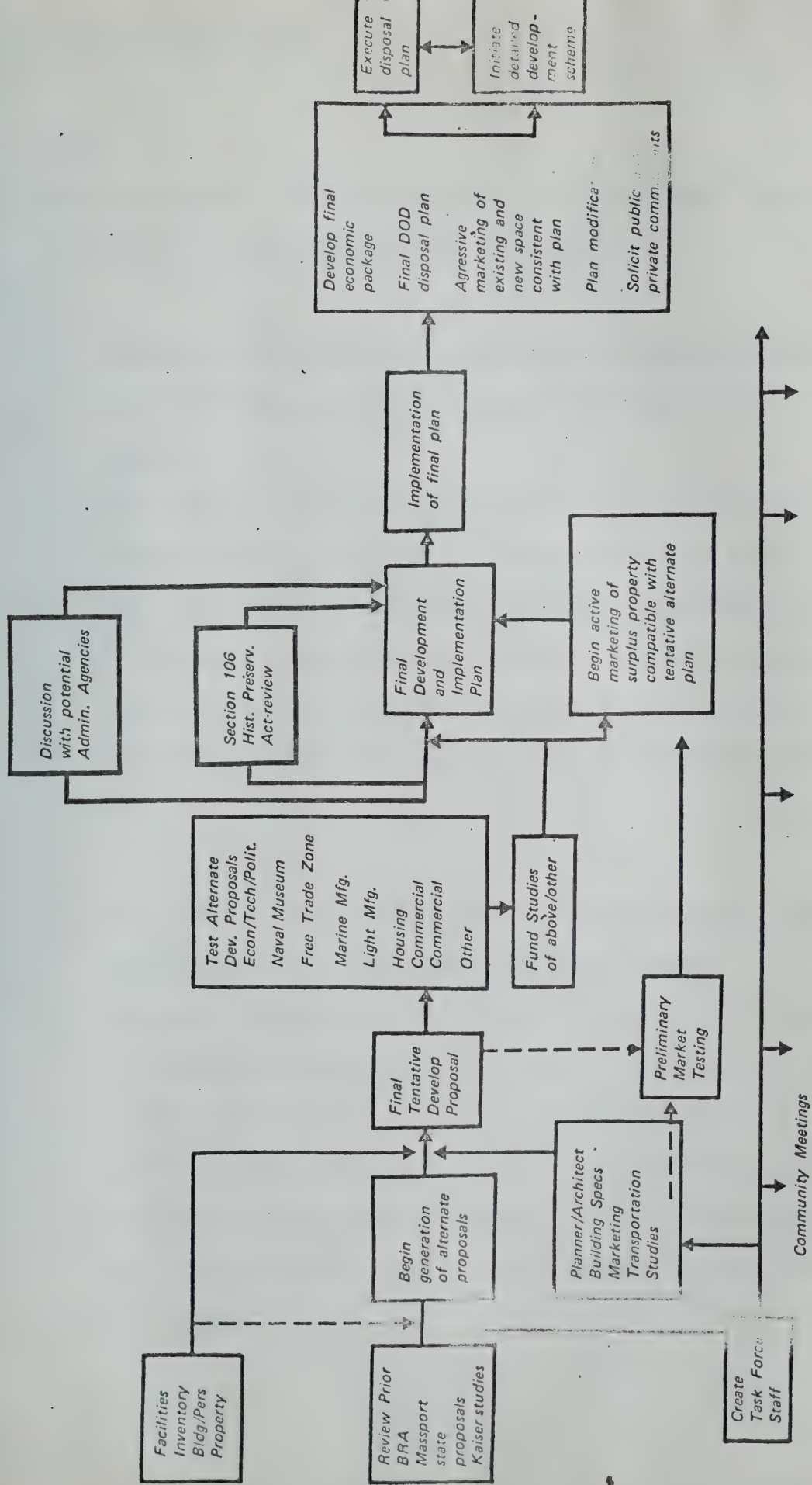
■ BLDGS TO BE RETAINED

○ NEW VISITORS CENTER

||||| PUBLIC OPEN SPACE

BOSTON REDEVELOPMENT AUTHORITY







## A. Framework for Development

### Goals

Potential uses of the Charlestown Naval Shipyard should be considered in the context of the following goals:

- 1) New uses of the shipyard should preserve, protect, and enhance the architectural, historical and environmental character of the site

The shipyard is important not only for the fine buildings which are located here, but also for its character as a naval shipyard. Plans for the site should attempt to preserve not only buildings of architectural and cultural importance but the essential physical qualities of the shipyard -- the piers, the architectural scale, the textures, the relationship to the water.

- 2) Development of the shipyard should be directed towards meeting the city's most critical needs - Jobs and Housing

Boston has little land left to meet its needs. What land is still undeveloped is generally in small scattered sites and is often unbuildable. The naval shipyard represents a relatively large piece of land which can be developed without disruption to the immediate community. It is large enough that its development could have considerable impact on the city's needs.





- 3) Development of the Charlestown Naval Shipyard should take advantage of its waterfront location

Although there are now fewer economic uses for urban waterfrontage than there were in the past, waterfront land is still very valuable -- especially for living and recreational environments. So far as is feasible, uses of the shipyard should either take some benefit from the waterfront or contribute to it.

- 4) Development of the Naval Shipyard should relate to the needs and character of the Charlestown community

Residents of the area see the shipyard as an extension of their community and are understandably concerned about the economic, physical, social and psychological effects which new development at the shipyard can have on Charlestown. A specific objective should be to improve Charlestown's connection with the waterfront.

- 5) Economic benefit should accrue to Charlestown, its residents and the City of Boston

Development in the shipyard should produce direct revenue for the city and should be directed to have a positive economic impact on the city, region and local community.



1) National Register

The entire shipyard is listed on the National Register of Historic Places. As a result, any undertaking assisted by the Federal government which would have a potential effect on the shipyard must be reviewed for possible adverse effect by the agency or department responsible. The National Advisory Council on Historic Preservation would have an opportunity to comment on the project.

2) Reversionary Interests

Title and jurisdiction over approximately 37.7 acres, mostly of water area, reverts to the Commonwealth when the area is no longer needed for a naval shipyard.

B. Reuse and Development Concepts

National Historic Park and Naval Museum

Because of its long and considerable role in the building of Naval ships, its architectural heritage, and the assets of its waterfront location, the Boston Naval Shipyard at Charlestown is important to both the City of Boston and the Nation.

The city proposes that as part of a development plan for the re-use of the shipyard, a portion of the site be reserved as an historic park of National importance. Such a "park" would feature a major Naval Museum, a visitors center interrelating regional historic





sites, open space and recreation facilities and appropriate services.

1) Naval Museum

The primary focus of the Charlestown Naval Shipyard historic park should be a Museum of Naval Architecture and History.

Such a museum would surpass in scope any of the existing Naval and Maritime Museums in this country and be modelled in part after the National Maritime Museum, Greenwich; England.

Exhibits should explore at least the following topics:

- a) Naval architecture and technology - demonstrating scientific principals such as, hydrodynamics and locomotion, and the development of ships reflecting an understanding of these concepts and the special requirements of ships of war.
- b) The art of ship building - methods of ship construction including materials, equipment, time and skills required.
- c) Exploration and navigation.
- d) Related technology - development of secondary naval equipment, such as rope, anchors and anchor chains.



The history of the U. S. Navy should be explored but not in such a way as to duplicate facilities at the Naval Academy at Annapolis, Maryland. Emphasis should be placed on the changing duties and living conditions of ordinary men aboard ships rather than on heroes or on particular events of history.

A small special exhibit should be included which tells the history of the Boston Naval Shipyard at Charlestown and the boats which were built here. To demonstrate both the technology changes in naval architecture and the experience of the U. S. Navy, full sized vessels should wherever possible be restored and moored at piers 1 to 4 of the shipyard. A major feature of the museum would, of course, be the U.S.S. Constitution.

## 2) Visitors Orientation Center

The Naval Shipyard is itself a Revolutionary War Site. It is now and will continue to be the major attraction on the Freedom Trail. Furthermore, it has a considerable amount of space which is potentially available for purposes of historical commemoration. It, therefore, seems an appropriate location for a visitors' center whose function would be to provide an introduction to the historic sites of the Region. The purpose of such a center would be to show the relationship and sequence of events preceding, during and after the period of armed conflict in the Boston region. Emphasis should be on the general and interpretative rather than the specific. For this reason, films and topographic maps and models might constitute the bulk of the exhibit material.



### 3) Support Facilities

Support facilities should include, as a minimum, the administrative and curatorial offices, and auditorium and library, restaurant, and quarters for the crews and honor guards of the Constitution and other historic ships at the site. In addition, space might be made available for the use of appropriate special purpose groups, such as local historical societies.

### 4) Open Space

Approximately 15 acres of open space are proposed to be included in the Naval Shipyard historic park. Included in this total are several different types of areas. Surrounding the principal exhibit buildings and drydocks, and extending out over the piers where historic ships will be moored, should be hard surfaced areas on which items such as anchors, masts, gun-mounts, figureheads, and other appropriate objects can be exhibited. Other areas should be landscaped for family recreational use.

### 5) Motel and Restaurant

According to a recent survey of recreation, tourism, and vacationing in Eastern Massachusetts, 80% of the visitors to an area stated "Historical sightseeing" or "museums" as the purpose of their visit. The Constitution drew over 700,000 visitors in 1969, and this number is expected to increase with the creation of a naval museum and other ancillary facilities. The addition of these facilities would also be likely to lengthen the average stay of the visitor to Boston.





Thus, the shipyard park would provide a ready-made attraction for a motel. Furthermore, the close proximity to downtown Boston and the accessibility to and from major highways to the north and west, puts this site in a favorable location for hotel development.

It is, therefore, proposed that a 300 room hotel be established either through new construction or rehabilitation of an existing structure. Included in the development might be a 'penthouse' restaurant overlooking the historic ships nearby and the fine view of the Boston skyline.

b. Other Uses

Market opportunities for new development within the City over the next decade are optimistic in view of projected rising income levels, expanded service and office facilities, demand for new housing, and a projected overall improvement in the city's economy. Within this context of this favorable climate, there are several possible re-uses for the Charlestown shipyard which meet the City's goals. Some development possibilities have been examined in a series of studies undertaken by the Boston Redevelopment Authority. In brief, these studies examine the potentials for commercial, residential, industrial and recreational development of the shipyard. These potentials can be summarized as follows:



1) Commercial Activity

Studies have indicated that many of the shipyard's granite structures which have architectural or historic merit could be rehabilitated for commercial uses in the manner of Ghirardelli Square in San Francisco. Antique shops, restaurants, and specialty shops in this location would benefit from and contribute to tourist activity generated by the historic sites nearby.

2) Residential Uses

Analysis of the housing market in Boston suggests that there is an unmet annual demand for 4-5,000 new housing units for low, middle and upper income households. New housing could be added to the City's stock through the creation of a new neighborhood in the shipyard. The waterfront location, recreational opportunities and excellent views of the Boston skyline should make this an attractive residential site for individuals and families.

3) Open Space and Recreation

Demand for water-based recreation is increasing at a staggering rate. The Metropolitan Area Planning Council has predicted that participation in boating will increase 800% between 1965 and 1990. Yet facilities for docking and launching private boats, and public boat rentals, are extremely limited in Boston. The Charlestown Shipyard clearly offers opportunities for water-oriented, as well as other urban recreation facilities.





#### 4) Industrial Use

As noted above, there is a real and very important need for industrial space in the City of Boston. Industrial uses which are labor intensive, and offer jobs that are stable, high paying and offer opportunities minority groups are encouraged to remain, or to locate in the city. It may be possible that firms which meet these criteria and which could benefit from the resources at the Charlestown Shipyard could be accommodated at the yard. Hopefully, such uses would retain the industrial character of the shipyard yet not be a nuisance to tourists or local residents.

At this time, it appears that the shipyard would not be suitable for the building or repair of major commercial ships, nor for major shipping activity. However, it may be feasible to build smaller pleasure craft or fishing vessels at this location.



PART III

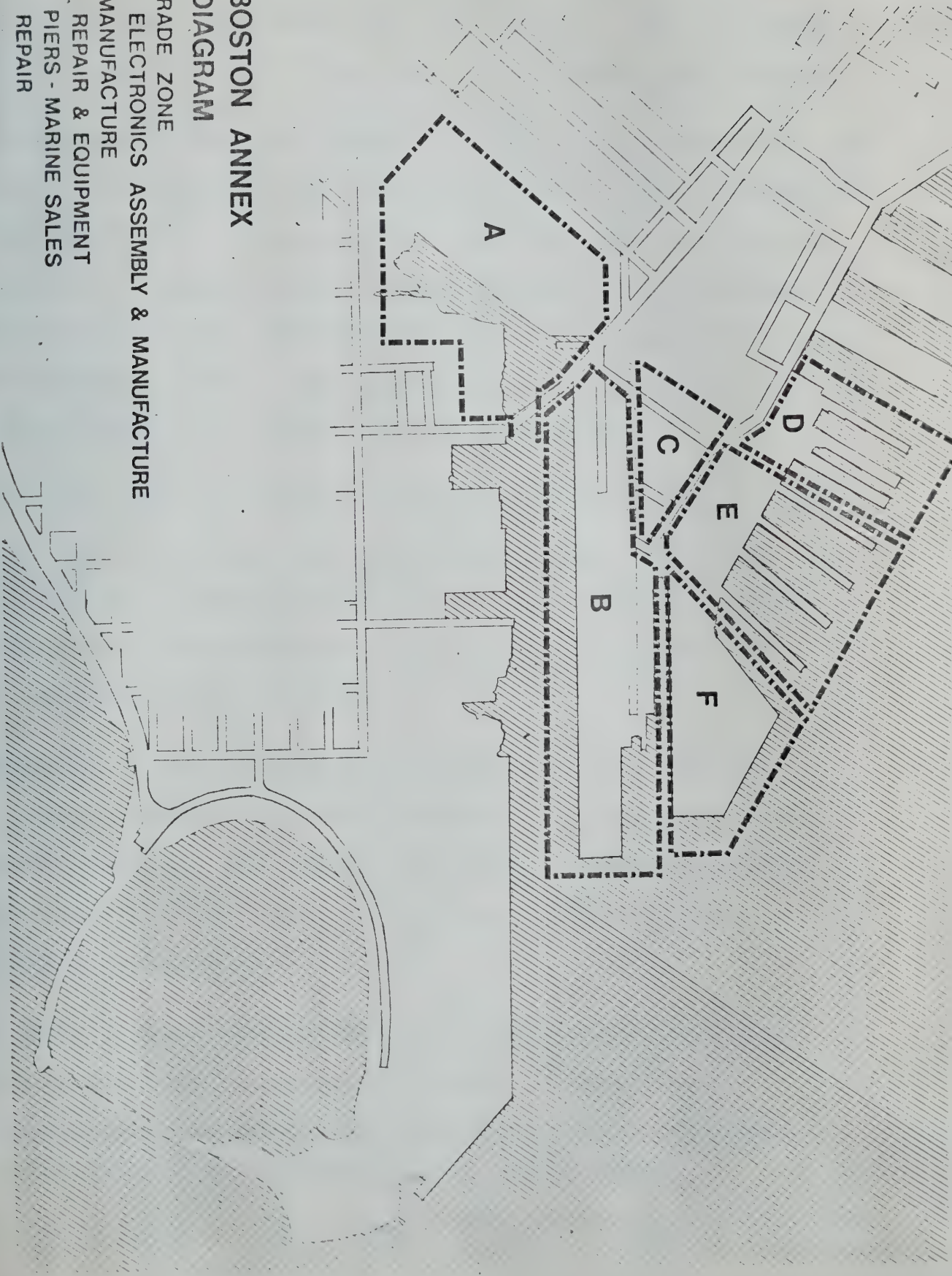
3. SOUTH BOSTON NAVAL ANNEX



# **SOUTH BOSTON ANNEX REUSE DIAGRAM**

- A** FREE TRADE ZONE
- B** MARINE ELECTRONICS ASSEMBLY & MANUFACTURE
- C** LIGHT MANUFACTURE
- D** MARINE REPAIR & EQUIPMENT
- E** PUBLIC PIERS - MARINE SALES
- F** MARINE REPAIR

BOSTON REDEVELOPMENT AUTHORITY







The development strategy for the South Boston Naval Annex must begin with the recognition that 239 acres of previously tax-exempt industrial land and piers constitute an enormous economic opportunity for Boston and its Citizens. The City must develop this land for the highest job and tax generation possible.

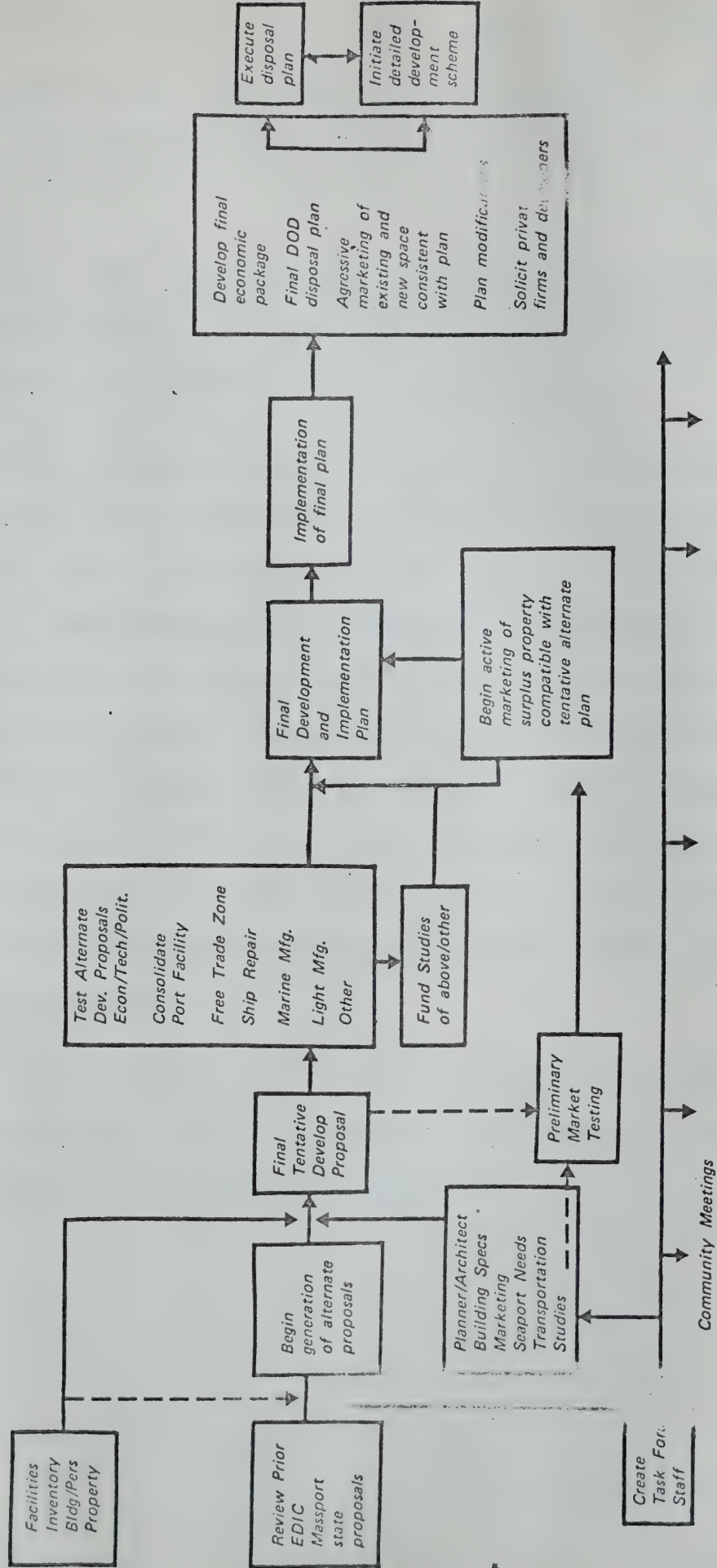
In conjunction with the overall strategy already mentioned, all appropriate non-industrial uses should be examined and discussed at the community level. Of course, the industrial and heavy shipping character of the facility and its surroundings, the specialized drydocks and buildings, and the noise levels and height restrictions imposed by flight paths of the airport suggest that much if not all of the naval annex will probably remain industrial.

The first task will involve the review of all previous state and local research reports and plans of the area. Once these are combined with the inventory of facilities at the annex, development alternatives can be generated not only for the annex but for the surrounding area as well.

Certainly one of the biggest problems at this stage will be the assessment of the existing inventory. It may be necessary to conduct a physical reuse study which would involve a detailed engineers report on the quality of existing facilities and feasibility for future use.

As Chart I, page III-3-3 indicates by the second month of operation Boston ought to be able to begin the generation of alternative proposals. These must be accompanied by a detailed building specifications, marketing data, seaport needs and transportation studies. Some proposals may well include a new









ship repair or ship construction facilities, small boat assembly, marine oriented manufacture, consolidated port facilities, a new free trade zone, and possibly new water oriented light manufacturing as well.

Since not all of the facilities can be marketed at the same time, it may be appropriate for some of the naval facility, to be test marketed before final completion of the planning.

The end results of the above process will be the development of the final economic plan. This will include the needs of the Defense Department itself. For example, the Navy will be given drydock priority if the drydocks were converted to private use. The final plan would also include a full statement as to the kinds of economic activities, and the levels of employment, and the kinds of skills that would be required for the yard. It would also include the levels of public and private investment together with long term capital cost and pro forma financing plans. It is likely that the final disposal of the property would be done through public as well as private development.

Although a final economic plan for area will take considerable time and effort to develop, the City of Boston has been able to formulate a preliminary and conceptual reuse plan.



## B. PRELIMINARY AND CONCEPTUAL REUSE PLAN

### Assumption

It is assumed that:

a) Integrated development can be planned and implemented for the entire South Boston Annex, former Army Base(excl. properties currently used by MPA), and properties South-West of Sumner Street.

b) Above named properties will be released and turned over to the selected agency on schedule (Before end of 1974).

c) Title to above properties (or other transfer vehicle) does not restrict use, addition or modification with the sole proviso that the U.S. Navy may require retention of dock No. 3 in workable condition and at the potential disposal of the U.S. Navy on agreed upon terms.

d) That otherwise transfer from the Federal Government is permanent and nonreversible under normal conditons.

(Times of emergency excluded)

e) That Naval vessels, other mobile equipments, stores, supplies, and other federal property which does not form part of the real estate or is either essential or desirable for Re-Use activities is removed at the expense of the federal government.

f) That the transfer of the property to the selected agency is made without prejudice, specific or implied.



g) That terms regarding use of said property are general and include those authorized as the Re-Use plan or its alternatives.

h) That the primary objective is to improve the economic and social welfare of Boston where this objective includes jobs, housing, recreation, tax revenue, and aesthetics.





## Framework for Development Plan of South Boston Annex

The conceptual development plan for the South Boston Annex was established on the premise that conversion to civilian use should:

- a) Require minimum time
- b) Require minimum investment
- c) Maximize utilization of existing facilities and equipment
- d) Maximize job opportunities with particular reference to newly unemployed marine industrial labor
- e) Maximize economic benefits to the greater Boston area
- f) Maximize tax revenues to the city.

The proposed plan provides for an intensive use of the area by such activities as ship repair, boat building, marine equipment manufacture, pleasure craft production, light manufacture and assembly and office including exhibition spaces. The plan also includes the development of a Trade Center, free trade industrial zone and free port pier in adjacent areas. The general allocation of land is shown in Figure 2.

Consideration was given to the use of the facility and land for the establishment of:

### a) A Refinery Complex

Although total area would be sufficient and the location desirable from a refineries viewpoint (distribution, water access, berthing, etc.), this alternative was dismissed for the following reasons:

- A refinery is unsightly
- It offers minimum employment per unit area and/or investment



- Air, water and thermal pollution is unacceptable in the center city even under the most stringent conditions of effluent control.
- Tax benefits to the city may be marginal
- It would develop perpetual pressure for expansion of storage facilities as refinery transport increases
- It would adversely effect adjacent property values
- It would be an ineffective use of existing facilities including the extensive waterfront
- It would eliminate use of the daydocks and other facilities by the U.S. Navy and others in times of emergency and otherwise.

b) Tanker Terminal

The proposition of establishment of a tanker terminal on the site was eliminated for the following reasons:

- Unacceptability of large tank farms on the site for aesthetic and air pollution control reasons
- Effect on property values
- Very limited job opportunities
- Low intensity use of land and facilities
- Marginal tax producing opportunity
- Incompatibility with alternate use, such as ship repair and manufacturing.

c) Power Station

The use of the area for the establishment of a major electric power station is attractive, although the effects are air and thermal pollution-these have to be investigated. The most attractive site for such a development would be the area north of the entrance to the large dock (marked "Ship Repair Expansion"). This site is remote from intensive use facilities, provides good air and water discharge disposition and introduces no interference with other activities. Although employment opportunities are margi-





nal, tax and power supply cost advantages may accrue to the city and the community. A direct delivery tanker terminal could form part of the complex. This location seems far enough from the landing path pattern of the airport to permit required heights of construction.

d) General Cargo Port and Warehousing Use

Proposals for the use of this site for an expansion of port and port related warehousing are dismissed for the following reasons:

- The port MPA and the city has more than sufficient berth and warehousing facilities to meet present and projected demand
- This low intensity use would not utilize majority of existing facilities.
- Employment opportunities are minimal
- Tax revenues would be marginal

e) Containter Terminal and Roll On - Roll Off Terminal

While the site is sufficiently large for a container terminal, only the North and West Wharfs provide effective marginal piers for container terminal use. The 26 acres of hinterland abutting these 800' and 1,100' long wharfs would provide an effective marshalling area.

The C Street-West wharf connection may then serve as a roll on - roll off terminal for ships and ferries. This alternative use would be attractive, if the demand, over and above that satisfied by existing Mystic (Schiavonne) and Castle Island terminals, could be established. Present projections are, that even under most optimistic assumptions, existing facilities could meet forecast demand through 1978.



If the MPA obtains use of the remainder of the Schiavonne property and more extensive utilization of the Castle Island terminal, demand will be met through 1984. Such use would, furthermore, introduce a large additional burden on inner city traffic arteries, reduce city tax revenues, offer marginal employment opportunities, and not utilize existing capital facilities effectively.

F) Extensive Recreational Use

Proposals for the exclusive development of the site into a recreational (pleasure boat-marina-restaurant-mall-shopping) area was considered. While such a plan has many attractions, the area and waterfront of the site is too large for effectively controlled recreational development. Furthermore, it would prevent establishment of a port user buffer and require a relocation of the center of community activities to provide the incentives for such development. While a partial development of the waterfront extension of Northern Avenue and C Street for recreation related activities such as pleasure boat exhibits, marinas, restaurants, and boat terminals is envisioned in the plan, if it is felt that such development must form part of a balanced and integrated development of marine (waterfront) related activities which include:

- Marine equipment manufacture
- Pleasure boat construction
- Fishing vessel repair
- Other



g) Parking Area

Consideration was given to the use of a major part of the site for parking. Although close to the city center, the site is not in walking distance nor located adjacent to large capacity rapid transit lines. The resulting traffic flow on Northern Avenue and Summer Street would be unacceptable. Extensions of route 93 and South East Expressway could possibly be led into the site, but this would still leave the imposition of shuttle service to and from the inner city.

The revenues from such an operation would fall short of attainable tax revenues from alternate balanced industrial use.

As a result of the above considerations of alternate uses of the site, a "Conceptual Development Plan" was established which offers a balanced use of the site for the purposes of economic and community revitalization of the inner city. It comprises low, medium and high intensity land use and maximizes utilization of existing facilities and equipment.

The essential elements of the Plan are:

- 1) A Ship Repair Facility for vessels of up to 180,000DWT
- 2) A Power Station Site with adjacent fueling berth.
- 3) Pleasure Boat and Marine Equipment Manufacturing
- 4) Fishing Boat and Floating Equipment Repair and Conversion (or Building) Facility
- 5) Light Manufacturing and Assembly Plants
- 6) Office and Exhibition Space (largely assigned to Port or Marine related activities)





- 7) Trade Center
- 8) Free Trade Industrial Zone
- 9) Free Port Pier

Discussing the rationale for the major components of plan next:

Ship Repair and Assembly Facility

Ship Repair facilities are labor intensive and usually provide an incentive for port utilization by ships. Boston has only one major ship repair facility in East Boston (Bethlehem Steel). This facility uses two floating docks, supporting shops and piers. The maximum size of vessel which can be docked in this yard is about 20,000 tons. In fact, few repair facilities for vessels of 90,000 tons or above exist North of Norfolk, Virginia. Maryland Drydock and Sun Ship building in the Delaware both can accommodate somewhat larger vessels but concentrate mainly on conversion and construction. Ship repair facilities in New York again are limited in size to about 40,000 ton vessels. (Seatrains Shipbuilding Corp. can accommodate 180,000 DWT vessels but does not perform ship repair.)

The imminent increase of large petroleum and other bulk imports and exports, will result in a larger number of bigger ships in the trade with North Atlantic Ports. Even before deepwater (offshore) ports are established on the Atlantic seaboard will large bulk carriers and container ships enter this trade. (Using Portland, Point Tupper, etc. for shipment)



Boston is ideally situated for docking and repair of such vessels (on their ballast leg, etc.).

A preliminary analysis indicates that over 200 different vessels of sizes that cannot be accommodated in available repair facilities on the U.S. North Atlantic Seaboard will trade in the area by 1975. If as little as 20% of this market is captured, revenues of such a repair facility could amount to about \$6-10 million per year. In addition, the repair yard may attract docking and ship assembly (or conversion) jobs from area shipyards such as Bath Iron Works (no dock) or General Dynamics (Quincy). A conservative estimate of total achievable turnover is \$10-15 million. The required investment into the facility (using existing dock, cranes, buildings and piers as outlined) is estimated at \$4-6 million. The expected employment is 700-1,200 total and should be fairly level. The yard is planned on 36 acres and will consist of a 180,000 DWT dock, 4x wirley cranes, large machine shop, welding and steel fabrication shop, shipwright and outfitting shop, and various electrical, piping, carpenter and painting shops. While primarily concentrating on ship repair, it will also offer services for such jobs as:

- LNG Tanker Assembly and Outfitting
- Production of Deck houses for ships
- Assembly of Offshore Platforms and Rigs
- Ship Conversion
- Construction of Tunnel Sections
- Assembly of all sorts of waterborne equipment such as crane-barges, floating tanker or container terminals etc.





Access to the Repair Shipyard will be provided by Northern and Drydock Avenue. In addition to the dock, the shipyard will comprise berth for floating repairs varying from 400' - 1,200' in length, as shown in Fig. 3.

#### Marine Equipment and Pleasure Craft Industry Development

This 20 acre industrial development will comprise manufacturing and assembly plants for, among other, activities such as:

- Pleasure Craft Boat Builders
- Marina Equipment Manufacturers
- Life Saving Equipment Manufacturers
- Marine Appliance Manufacturers
- Diving and Salvage Equipment Manufacturers
- Deck and Hull Engineering Equipment Assembly
- Marine Exploration Equipment.

The three large industrial buildings comprising this development offer opportunities for industrial activity in the above fields employing about 1,200-1,800 men with a gross exceeding \$30 million.

Equipment showrooms fronting C Street would provide an attractive waterfront activity supplementing public pier and recreational facilities in attracting the public.

Similarly, public pier space will be made available to tenants of this development for floating test or exhibition of their products.

The adjacent 24 acre site to the southwest is designated as light manufacturing and offers in addition to large open



areas and smaller buildings, excellent rail and road communication. This area is planned for marine component manufacture such as used in marine equipment, pleasure boats, fishing vessels, ship building, ship repair and related marine activities. Total industrial activity here is expected to provide employment for about 800 and gross revenues of about \$32 million. The marine industrial areas are served by an extensive rail (into major buildings) and road network connected to both Northern Avenue and Summer Street.

#### Fishing Boat Repair Facility and Ship Repair Annex

The smaller dock and an area of about 9 acres surrounding it will be assigned to fishing vessel and miscellaneous marine equipment repair as well as a ship repair annex. This facility is an extension of the present fish pier. Pier 7 will provide an additional fish pier extension with the area at the head of Pier 7 and up to Northern Avenue developed into a fish wholesale-retail market.

#### Exhibition, Light Assembly and Office Facilities

The large Navy warehouse and office building (7 floors) south of Drydock Avenue will be assigned to marine related office functions at the western end, and light assembly and exhibition at the eastern end. It is expected that the small headroom of this building will attract primarily electronic, instrument and small component manufactures and assembly plants. Similarly, preference in assigning office or exhibition space should be given to shipping agents, ship chandlers,



marine sales organizations and related activities (including customs, etc.).

A specialized main access divided artery to Summer Street will serve this complex. A large parking area--3 acres--is to be located along Summer Street, west of this development.

#### Free Port Industrial Development

The area of about 60 acres southwest of Summer Street is planned as a free trade industrial zone served by a single free port pier at the end of the Army Base terminal in the Reserve Channel. This development will offer free trade opportunities to manufactureres with major product exports and/or material imports, as well as export/import businesses of various sorts. A secure overpass may be required to connect this development with the free port pier (unless the Treasury Dept. rules otherwise).

#### International Trade Center

The development plan includes conversion of the Fargo Building complex into an International Trade Center. This complex will include sales and administrative offices for the Free Trade Industrial Zone as well as corporate offices of various manufacturers using the site. An attempt will also be made to attract various international trading firms, banks and transportation companies.

#### Commonwealth and Fish Pier Development Opportunities

The present fish pier contains a variety of facilities with varied use and effectiveness. It appears that any attempt at revitalizing the Boston (and N.E.) fishing industry requires





at the outset the development of an effective and integrated fishing center. It is planned to include in this center:

- More extensive and accessible fish piers by including pier 7 and possibly pier 6
- Concentration of fish processing and related activities on the fish pier
- A fish wholesale/retail market between pier 7 and Northern Avenue
- A fishing vessel repair facility between pier 5 and 6
- A sport fisherman pier in the basin between pier 4 and 5
- A row of specialized fishing equipment stores at the head of the sport fisherman piers.

#### Fishing Vessel Production Facility Development

There is an established need for several hundred new fishing trawlers and related craft to re-establish and maintain the New England fishing industry, presently composed largely of obsolete, and average vessels. Recent developments abroad indicate that mass in-line production of series of standard fishing vessels may reduce delivered costs to about 60% of that of custom built vessels. Boston is an ideal location for the establishment of such a facility because of market, manpower, and facility conditions. A preliminary investigation of optimum locations for such a facility indicates the advisability of establishing it in Charlestown versus South Boston Annes. The reasons for this conclusion are:

- Available Charlestown Navy Yard Facilities (Between



pier 7 and 11) are ideally suited and reduce capital investments.

- Mass shipbuilding of fishing vessels would be incompatible with other South Annex activities
- The waterfront and road access requirements of the facility would throttle use of other land.

### Conclusions and Recommendations

The conceptual Re-Use study and development plan presented in this draft report is very preliminary. No demand and economic feasibility study was performed to support the plan except for a very limited evaluation of the ship repair, fishing vessel, pleasure boat and marine equipment market. An attempt was made to develop a plan which while achieving the employment, tax revenue and economic goals, also results in a balanced development which complements the social, architectural and traditional structure of the city.

Much more detailed analysis is required to translate this conceptual Re-Use study into a meaningful and effective plan. Time is of an essence though, as the demands for this prime site are numerous. A unique opportunity for the City of Boston to develop a new life center and stimulus in the inner city is availabler here. Few cities have such once-in-a-lifetime opportunity. It is hoped that this opportunity is not missed.





Part IV

Organizational Structure & Proposed Budget



Organizational Structure  
and Proposal for Funding  
Part IV



## Part IV Organizational Structure and Proposal for Funding

### 1. Introduction

In order to insure that the development objectives and reuse potentials of the Charlestown Naval Shipyard and the South Boston Naval Annex are pursued in the most effective manner possible, and to further insure that the conversion process is synchronized to minimize the time in which facilities are inoperative, the City of Boston proposes to undertake an intensive planning and development program over the next 18 month period. The purposes of this program are:

1. To inventory and analyze the land, structures and personal property to be converted from military use.
2. To determine the optimum feasible reuse potential of these facilities in the context of adjacent neighborhoods and city needs.
3. To prepare preliminary and final development plans for conversion of the Charlestown and South Boston sites.
4. To develop an implementation strategy including administration and management procedures, financing of development and operations, and tax or other revenue arrangements.





## 2. Management of Planning Program, Budget, and Staffing

In order to achieve the overall planning objectives noted above, a budget covering planning activities totalling \$430,325 is requested by this proposal. This budget is deemed essential in order to enable the City of Boston to formulate a responsible proposal for the future development of the Charlestown and South Boston Naval properties reflecting the best interests of the local community the City of Boston, the region and the Federal Government. A detailed outline of the factors proposed to be investigated during the planning phase is contained in the following section.

At the request of Mayor Kevin H. White, the responsibilities for conducting this effort will lie jointly with the Boston Economic Development and Industrial Commission (EDIC) and the Boston Redevelopment Authority (BRA). EDIC is an agency within the City administration charged with the responsibility of coordinating and promoting overall economic and industrial development in the City, and empowered under state legislation to carry out specific economic and industrial projects. The BRA, an Authority established under state legislation, serves as the City of Boston's official Planning Board as well as the City's renewal and development agency empowered to carry out development projects under state and federal statutes.



In brief, responsibilities in South Boston and Charlestown for overall land use planning, urban design, community participation, and planning for public sector components (such as the proposed Historic Marine Park in Charlestown) will rest with the Boston Redevelopment Authority under the direction of Robert T. Kenney, Director. Responsibilities for overall economic and industrial development in Charlestown and South Boston, Port development, industrial marketing and management, and development impact evaluation will rest with the Economic Development and Industrial Commission under the direction of Gerald Bush, Director.





## Part IV

### Organizational Structure & Proposed Budget



The foregoing has tried to indicate the City's current assessment of the situation in terms of goals, existing facilities, and development strategies. What is now required is a description of the technical assistance needs necessary to carry out such an ambitious program. It is proposed that the program last a minimum of a year and a half, and that it be implemented by the Mayor's task force on base closing.

The task force will be jointly headed by the Director of the Office of Commerce and Manpower and the Director of the Boston Redevelopment Authority.

The principal staff needs of the program will consist of a development administrator, urban systems planner, marketing manager, and community liaison officer. These four positions will form the nucleus for project research, project feasibility, and project implementation.

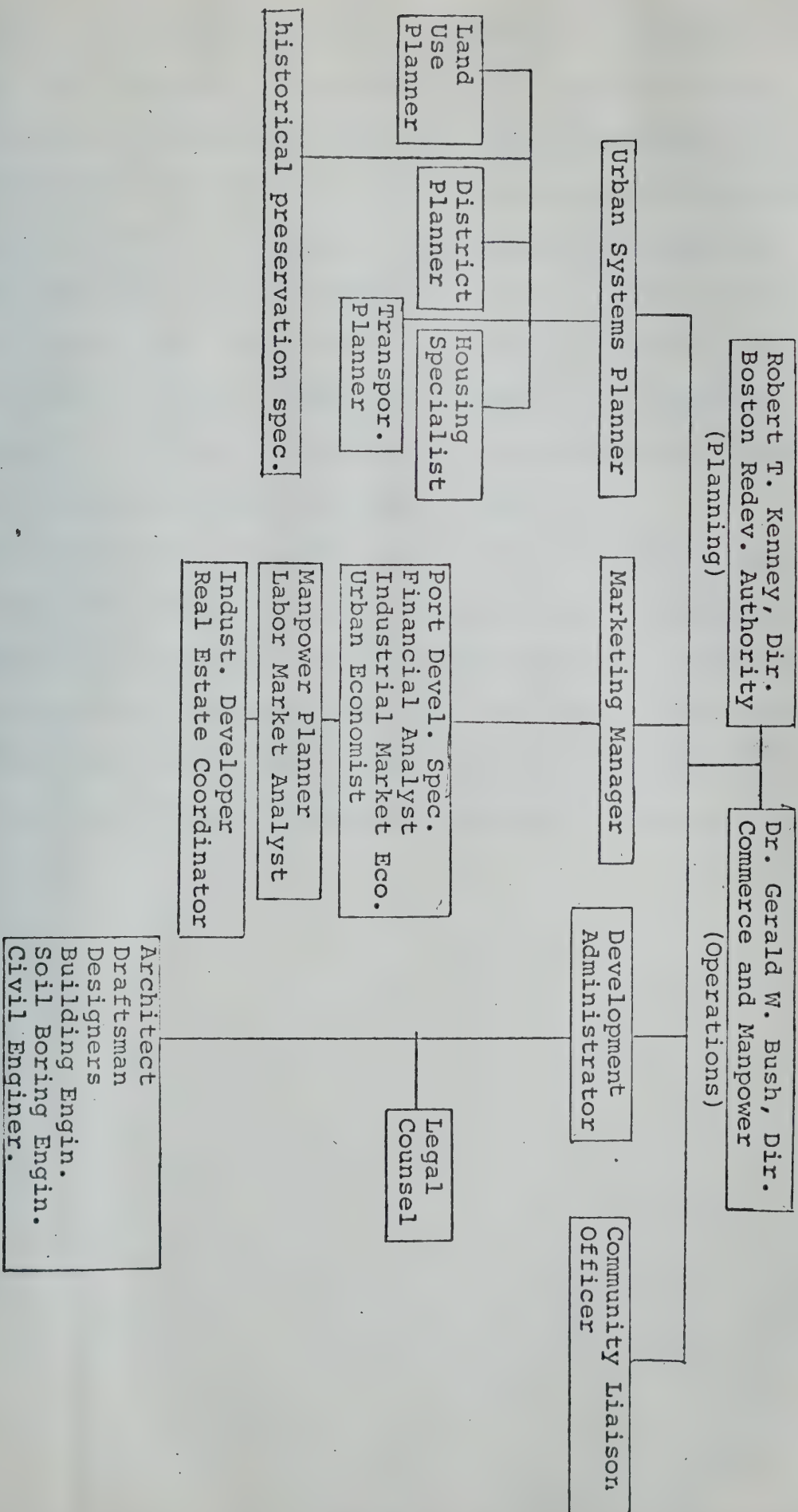
Chart I indicates the organization structure of the Mayor's task force. It is important to note that each of the four major staff positions will have a pool of technical support labor in order to marshal maximum competence in dealing with the problem at hand. The development administrator for example will have architectural, drafting and engineering support as well as legal counsel. The urban systems planner will coordinate the research of land use planners, district planners, housing specialist, historical preservation specialist, and transportation planners. This marketing manager will be able to test the economic feasibility of the development plans or of alternative development plans. The community liaison officer will be able to test the political and social feasibility and desirability of alternatives as well.



Chart I

MAYOR'S ADVISORY COMMITTEE

MAYOR'S STAFF TASK FORCE







The work flow involved has a feedback nature to it. For example, the marketing, development and community liaison teams can feed basic information into the systems planning team, which when combined with basic land use and planning considerations will form the nucleus for developing preliminary alternatives. These alternatives then will be tested by the marketing and community liaison teams. In turn, those that seem feasible will be coordinated by the development team and implemented if possible. If not, an alternative will be discarded or modified in form and resubmitted to the marketing-community liaison teams.

While the City is capable and willing to provide staff to this task force effort, because Boston is in an austerity year, and because the closing of the Shipyard has come so suddenly, the City simply cannot support the entire planning effort from existing resources. The budget that follows in Part IV, Section 3, makes clear the federal and non-federal components of this proposed task force.



Part IV:

3. Proposed Budget





FEDERAL FUNDS NEEDED  
FISCAL YEARS 1973, 1974, 1975  
SUMMARY

	<u>(June 73)</u> <u>Fiscal 73</u>	<u>(July 73-July 74)</u> <u>Fiscal 74</u>	<u>(Aug-Nov 74)</u> <u>Fiscal 75</u>	<u>Total</u>
Personnel	12,917	155,000	64,583	232,500
Consultants & Contract Serv.	9,305	111,667	46,528	167,500
Travel & Per Diem	444	5,334	2,222	8,000
Other Costs	<u>1,240</u>	<u>14,884</u>	<u>6,201</u>	<u>22,325</u>
Total	23,906	286,885	119,534	430,325



TOTAL PROGRAM COSTS

Personnel:	Annual Cost	Federal	NON FEDERAL SHARE		TOTAL
			Cash	In-Kind	
No. 1 Director	25,000		37,500		
1 Dev. Administrator	18,000	27,000			
1 Urb. Systems Plnr.	18,000	27,000			
1 Mrktng. Mgr.	18,000	27,000			
1 Community Liaison	15,000	22,500			
5 Cleric-Secy.	7,500	22,500	33,750		
1 Architect	15,000	22,500			
1 Draftsman	12,000	18,000			
1 Trans. Plnr.	15,000			22,500	
1 Land Use Plnr.	15,000			22,500	
1 District Plnr.	13,000			19,500	
1 Historic Preserv. Spec.	16,000			24,000	
1 Urb. Economist	14,000	21,000			
(50%) 1 Manpower Econ.	12,000		9,000		
1 Indus. Dev. Spec.	15,000	22,500			
1 Financial Analyst	15,000	22,500			
(50%) 1 Indus. Realtor	15,000		11,250		
Sub Total		232,500	91,500	88,000	412,000
<hr/>					
<u>Consultants &amp; Contract Serv:</u>					
Port Development		25,000			
Marketing - housing, industry Port		40,000			
Engineer, Design, Appraisal		50,000			
Bldg. Conversion (97 Bldgs)		30,000			
Legal Assistance		22,500			
Sub Total		167,500			167,500
<hr/>					
<u>Travel:</u>					
Transportation		6,000			
Per Diem		2,000			
Sub Total		8,000			8,000
<hr/>					
<u>Space &amp; Rental:</u>					
Space				15,000	
Office Equip.			2,000		
Office Furn.				750	
Sub Total			2,000	15,750	17,750
<hr/>					
<u>Other Costs:</u>					
Consum. Supplies		1,500			
Postage		1,200			
Print & Pub.		8,000			
Telephone & Telegraph				2,500	
Personnel Burden @ 5%		11,625	4,575	4,400	
Sub Total		22,325	4,575	6,900	33,800
<hr/>					
GRAND TOTALS		430,325	98,075	110,650	639,050



## FEDERAL COSTS FOR PLANNING

Overall land use planning, urban design, community liaison, public sector improvements includes:

1. Inventory, Evaluation, and Appraisal of grounds, buildings and equipment
2. Planning analysis of sites
3. Analysis of local and regional impact of alternate reuse proposals
4. Development of plans for new infrastructure required to meet the needs of alternate reuse proposals.

<u>Staff</u>	<u>Annual Cost</u>	<u>Federal Total Cost</u>
1 Development Administrator	\$18,000	\$ 27,000
1 Urban Systems Planner	18,000	27,000
1 Clerical Secretary	7,500	11,250
1 Architect	15,000	22,500
1 Draftsman	12,000	18,000
1 Transportation Planner	15,000	
1 Land Use Planner	15,000	
1 District Planner	13,000	
1 Historic Preservation Specialist	16,000	
<u>Consultants</u>		
Marketing-Housing		10,000
Engineer, Design, Appraisal		25,000
Building Conversion		15,000
		<u>155,750</u>
<u>Other Costs</u>		
Transportation, Per Diem		4,000
Supplies, Postage, Printing		5,350
Personnel Burden @ 5%		<u>5,287</u>
<u>Total</u>		<u>14,637</u>
TOTAL PROJECT COST		170,387





## FEDERAL COST FOR ECONOMIC DEVELOPMENT

Overall economic and industrial development, port development, industrial marketing and management, economic impact and evaluation includes:

1. Demand estimates, employment and tax implications for

ship construction LNG, medium tankers, fishing fleet, hover craft  
ship repair LNG, medium tankers, fishing fleet, hover craft  
Pleasure craft assembly  
Light manufacturing (marine related)  
Light manufacturing (non-marine related)

2. Pier, drydock and building re-use feasibility study

3. New construction: engineering, soil studies, design

4. Pro forma capital cost and cash flow analysis

5. Marketing documents for each alternative including:

Land and construction cost, labor costs and skills,  
Transportation costs and linkages, customer contacts,  
Specialized or custom contract business services of a support nature,  
Subcontractor and inventory linkages.

6. Test and final marketing

7. Economic Impact and evaluation.

<u>Staff</u>	<u>Annual Cost</u>	<u>Federal Total Cost</u>
1 Marketing Manager	\$18,000	\$ 27,000
1 Community Liaison	15,000	22,500
1 Cleric-Secy	7,500	11,250
1 Urban Economist	14,000	21,000
1 Manpower Specialist @ 50% (in-kind)	12,000	
1 Industrial Develop. Spec.	15,000	22,500
1 Financial Analyst	15,000	22,500
1 Industrial Realtor @ 50% (in-kind)	15,000	
<u>Consultants</u>		
Port Development		25,000
Marketing - housing, industry, Port		30,000
Engineer, Design, Appraisal		25,000
Bldg. Conversion (97 Bldgs.)		15,000
Legal Assistance		22,500
Total		\$ 244,250

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### Other Costs

Transportation, Per Diem	4,000
Supplies, Postage & Printing	5,350
Personnel Burden @ 5%	6,338
Total	\$ 15,688

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TOTAL PROJECT COST \$ 259,938



## Part IV

### 4. Work Program



The item noted on the following pages indicate the range of issues which the City must investigate in order to develop a responsible proposal for the reuse, management, and development of the Charlestown and South Boston properties.





1. Planning Program - Charlestown

CONTENTS

I. Existing Characteristics

- A. Detailed Inventory and Evaluation of Existing Uses
- B. Site Analyses
- C. Regional/Sub Regional Context

II. Development Potentials

- A. Factors Affecting Development
- B. Detailed Review and Evaluation of Reuse Alternatives
- C. Market Trends

III. Development Plan

- A. Detailed Goals, Objectives and Policies
- B. Preliminary Plan
- C. Impact of Plan
- D. Plan Feasibility
- E. Final Development Plan
- F. Implementation Strategies



# I. Existing Characteristics - Charlestown

## A. Detailed Inventory & Evaluation of Existing Uses

### 1. Buildings

- a. Existing Uses
- b. Existing Facilities
- c. Existing Conditions
- d. Sizes - Floor Space, Height, Types of Spaces
- e. Load Capacities

### 2. Grounds

- a. Parking
- b. Access Roads
- c. Undeveloped Land

### 3. Piers

- a. Existing Uses
- b. Load Capacities
- c. Existing Conditions

### 4. Personal Property

## B. Site Analysis

- 1. Structures to remain
- 2. Structures to be demolished
- 3. Topography
- 4. Structural viability of piers
- 5. Views
- 6. Soil Conditions
- 7. Access - vehicular, pedestrian, water
- 8. Noise levels and environment



C. Regional/Sub Regional Context (Relation of Existing Facilities to adjacent neighborhoods in Charlestown and to the Economy of the City of Boston and the Region

1. Employment
2. Land Use
3. Environment
4. Tax Revenues
5. Accessibility





## II. Development Potentials - Charlestown

### A. Factors Affecting Development

1. Tourism - USS Constitution - Bunker Hill
2. Access - Tobin Bridge
3. Charlestown - Urban Renewal Program
4. Soil Conditions

### B. Detailed Review and Evaluation of Reuse Alternatives

1. Past and Current Proposals
  - a. Historic Marine Park - USS Constitution
  - b. Other
2. Other Possibilities
  - a. Housing
  - b. Industry
  - c. Seasonal Marina
  - d. Public Open Space
  - e. Hotels
  - f. Restaurants
  - g. Other Tourist Oriented Commercial
  - h. Facility for Mass Production of Fishing Vessels
  - i. Other Job producing Uses
  - j. Other Tax Revenue Producing Uses

### C. Market Trends

1. Tourism Forecasts for Historic Marine Park and Naval Museum (U.S.S. Constitution)
2. Impact of Tourism Market for Commercial Space
  - a. Hotel - Motels
  - b. Restaurants
  - c. Other Tourist Oriented Businesses
3. Housing Demand
4. Demand for Industrial Space



### III. Development Plan - Charlestown

#### A. Detailed Goals, Objectives, Policies

1. Housing
2. Economic Development
  - a. Tax Revenue
  - b. Employment
  - c. Tourism
3. Cultural
  - a. Historic Preservation
  - b. Education
4. Recreation and Open Space
  - a. Public Owned & Operated
  - b. Private Owned & Operated
  - c. Water Edge
5. Environment
  - a. Air and Noise
  - b. Visual
6. Urban Design - Land Utilization
7. Access
  - a. Vehicular - Cars and trucks, parking
  - b. Public Transportation - buses and rapid transit
  - c. Water Transport - ferries, hovercraft, private boats
  - d. Other - Pedestrian movement, bicycle paths
8. Community Review

#### B. Preliminary Physical Plan

1. Detailed Land Use Proposals
  - a. Design & Location of Naval Museum - Historic Marine Park
  - b. Design & Location of Housing - Density, Type, Size, Rent Levels,  
Design



- c. Design & Location of Commercial Uses, type, square footage, design
- d. Design & Location of Industrial Uses, type, square footage, design
- e. Design & Location of Other Specified Uses

2. Detailed Access Proposals

- a. Design & Location of Roads and Paths
- b. Design & Location of Bus Routes & Transit Stops
- c. Design & Location of Docking Facilities for Water Vessels

C. Impact of Plan

1. Impact of Plan on City and Regional Economy

- a. Employment
- b. Commercial and Industrial Activity
- c. Tourism
- d. Tax Revenue
- e. Charlestown Land Values
- f. Housing Market
- g. Other

2. Impact of Proposed Uses on the Local Environment

- a. Noise
- b. Air
- c. Water
- d. Visual Quality
- e. Charlestown Shoreline
- f. Other

D. Plan Feasibility

- 1. Soils Studies
- 2. Construction Costs





- a. Cost of Rehabilitation and Conversion of Existing Structures
  - b. Cost of New Construction
  - c. Costs of other plan elements.
3. Real Estate Appraisals
4. Financial Feasibility and Resources
  - a. State and Federal Programs
  - b. Private Investment
  - c. Other
5. Community Review of Plan Elements
- E. Final Development Plan
  1. Final Determination of Plan Elements
  2. Detailed Financial Package for Implementation
  3. Final Environmental Impact Statement
  4. Community Consensus
  5. Local, State and Federal Approvals
  6. Final Determination of procedures for Operation and Management of planned Uses
- F. Implementation Methods and Strategies
  1. Final Arrangements for development, operation and management of Naval Museum and Marine Parks
    - a. National Park Service
    - b. U. S. Navy (USS Constitution)
  2. Preparation of Developer Kits
    - a. Housing Parcels
    - b. Commercial Parcels
    - c. Industrial Parcels
  3. Solicitation of Private Firms and Developers
  4. Formal Acquisition of Navy Yard from Department of Defense
  5. Disposition of Development Parcels



6. Preparation and submission of Funding Applications to execute the plan
7. Commitments from other Public Agencies to execute public improvements provided in the plan
  - a. Mass DPW
  - b. MBTA
  - c. Mass Turnpike Authority
  - d. Mass Port Authority
  - e. Other



## 2. Planning Program - South Boston

### CONTENTS

#### I. Existing Characteristics

- A. Detailed Inventory & Evaluation of Existing Uses
- B. Site Analysis
- C. Regional/Sub Regional Context

#### II. Development Potentials

- A. Factors Affecting Development
- B. Detailed Review and Evaluation of Reuse Alternatives
- C. Market Trends

#### III. Development Plan

- A. Detailed Goals, Objectives, Policies
- B. Preliminary Plan
- C. Impact of Plan
- D. Plan Feasibility
- E. Final Development Plan
- F. Implementation Strategies





# I. Existing Characteristics - South Boston

## A. Detailed Inventory and Evaluation of Existing Uses

### 1. Buildings

- a. Existing Uses
- b. Existing Facilities
- c. Existing Conditions
- d. Sizes - Floor Space, Height, Types of Spaces
- e. Load Capacities

### 2. Grounds

- a. Parking
- b. Access Roads
- c. Undeveloped Land

### 3. Piers

- a. Existing Uses
- b. Load Capacities
- c. Existing Conditions

### 4. Personal Property

## B. Site Analysis

- 1. Structures to remain
- 2. Structures to be demolished
- 3. Topography
- 4. Structural viability of piers
- 5. Views
- 6. Soil Conditions
- 7. Access - vehicular, pedestrian, water
- 8. Noise levels and environment



C. Regional/Sub Regional Context (Relation of existing facilities to adjacent neighborhoods in South Boston and to the economy of the City of Boston and the Region)

1. Employment
2. Land Use
3. Environment
4. Tax Revenues
5. Accessibility



## II. Development Potentials - South Boston

### A. Factors Affecting Development

1. Logan Airport Flight Paths
2. Mass. Port Holdings
3. Seaport Development Needs
4. Athanas Development
5. British Properties
6. Other Fort Point Channel Developments
7. State Highway and Transit Plans
8. Preliminary Estimates of Market Trends
9. Access
10. Soil Conditions
11. Other

### B. Detailed Review and Evaluation of Reuse Alternatives

1. Past and Current Proposals
  - a. Free Trade Zone
  - b. Other
2. Other Possibilities
  - a. General Cargo Area
  - b. Marine Instrument Manufacturing & Related Uses
  - c. Ship Repair Facility & Auxiliary Uses
  - d. Facility for Manufacturing and Display of Pleasure Craft
  - e. Other Job Producing Uses
  - f. Other Tax Revenue Producing Uses

### C. Market Trends

1. Demand for Industrial Space
2. Demand for Port Oriented Uses





### III. Development Plan - South Boston

#### A. Detailed Goals, Objectives and Policies

1. Economic Development
  - a. Tax Revenue
  - b. Employment
  - c. Tourism - Gateway to U.S. from abroad
2. Open Space
  - a. Access to water edge
  - b. Other
3. Environment
  - a. Air and noise
  - b. Visual
4. Urban Design - Land Utiliation
5. Access
  - a. Vehicular - cars and trucks, parking
  - b. Public Transportation - buses and Rapid Transit
  - c. Water Transport - ferries, hovercraft, private boats, ocean vessels
  - d. Other - pedestrian movement, bicycle paths
6. Community Review

#### B. Preliminary Physical Plan

1. Detailed Land Use Proposals
  - a. Design location of Marine Instrument facilities
  - b. Design and location of General Cargo areas
  - c. Design and location of Ship Repair facilities
  - d. Design and location of Pleasure Craft facilities
  - e. Design and location of Free Trade Zone
  - f. Design and location of other uses



## 2. Detailed Access Proposals

- a. Design and location of Roads and Paths
- b. Design and location of Transit Stps and Bus Routes
- c. Design and location of Docking facilities for water vessels

## C. Impact of Plan

### 1. Impact of Plan on City and Regional Economy

- a. Employment
- b. Commercial and Industrial Activity
- c. Tourism from Abroad
- d. Tax Revenue
- e. South Boston Land Values
- f. Other

### 2. Impact of proposed uses on the local Environment

- a. Noise
- b. Air
- c. Water
- d. Visual Quality
- e. South Boston Shoreline
- f. Other

## D. Plan Feasibility

### 1. Soils Studies

### 2. Construction Costs

- a. Cost of Rehabilitation and Conversion of Existing Structures
- b. Cost of New Construction

### 3. Real Estate Appraisals

### 4. Financial Feasibility and Resources

- a. State and Federal Programs
- b. Private Investment
- c. Other

### 5. Community Review of Plan Elements



E. Final Development Plan

1. Final Determination of Plan Elements
2. Detailed Financial Package for Implementation
3. Final Environmental Impact Statement
4. Community Consensus
5. Local, State and Federal Approval
6. Final Determination of procedures for operation and management of planned uses





F. Implementation Methods and Strategies

1. Preparation of Developers Kits
2. Final arrangements with Mass Port Authority on cargo facility
3. Solicitation of Private Firms and Developers
4. Formal Acquisition of Navy Yard from Department of Defense
5. Disposition of Development Parcels
6. Preparation and Submission of Funding Applications to execute the plan
7. Commitments from other Public Agencies to execute public Improvements provided in the plan.
  - a. Mass DPW
  - b. MBTA
  - c. Mass Port Authority
  - d. Other



## Appendices



## APPENDIX I

### Manpower and Related Trends

#### City of Boston

Changes in the Boston SMSA economy referred to in the Introduction are shown in Table I. The changes in the economy of the City of Boston are shown in Table II.

Table III points out some significant demographic changes that took place from 1960 to 1970. Of concern to the manpower effort in the MAPC is the upgrading of the labor force as shown by the increase in the percent of the labor force who are high school graduates, and the short increase in the percent of workers in the professional and clerical occupations.

Table IV shows the jobs most frequently available on Job Bank listings. The SMSA posts jobs that may be located not only in the City, or the SMSA, but anywhere in the Commonwealth; some of the positions are located outside New England. A further qualification of the Job Bank data is that only a small percentage of job openings are placed with the Job Bank. In spite of these reservations, the Job Bank can give some indication of the local labor market conditions.

Tables V, VI, and VII were developed by utilizing the occupational matrix in Tomorrow's Manpower Needs, Volume IV, and local industry projections found in The Expanding City of Boston Economy. Based on the application of the matrix to the local estimates and projections, it is expected that the economy will continue to undergo major structural changes in the next seven years. A 123,000





increase in the number of jobs is expected. Most of this 23% increase will be in the high grade service, in the finance, insurance, and real estate industries. The occupations demonstrating the greatest growth are the professional, clerical, and service positions that grew so noticeably in the last decade.

Table VIII shows the industrial composition of the Boston MAPC labor force in 1970. As the industrial mix of the economy has shifted, the labor force has had to adapt to the new occupations. The economy, however, appears to be shifting more rapidly than the labor force. The occupational mix of the labor force is shown in Table IX. Projections of changes in the occupational mix are shown in Table X.



TABLE I

## ANNUAL WORK FORCE AVERAGES, BOSTON SMSA

	1960	1965	1967	1969
1. Civilian Work Force	1,250.6	1,303.3	1,380.0	1,427.4
2. Unemployment	51.5	52.4	45.3	46.0
Percent of Work Force	4.1	4.0	3.3	3.2
3. Employment - Total	1,192.3	1,249.9	1,334.0	1,378.0
a. Nonagricultural Wage & Salary	1,074.7	1,140.3	1,231.4	1,277.4
1. Manufacturing	303.8	284.1	304.4	292.2
Durable Goods	155.5	148.3	171.2	167.2
Primary Metals	4.8	4.0	4.4	3.9
Fabricated Metals	16.5	17.0	18.0	18.4
Machinery (exe. elec.)	28.2	33.2	37.3	35.4
Electrical Machinery	61.9	47.9	56.2	53.4
Transportation Equipment	18.4	18.8	23.7	21.5
Instruments	14.5	16.3	19.2	20.9
Other Durable Goods	11.2	11.1	12.4	13.7
Nondurable Goods	148.3	135.8	133.2	125.0
Food	29.2	25.4	24.5	24.0
Textiles	6.8	6.4	6.0	5.6
Apparel	23.9	20.2	19.3	17.9
Paper	11.1	10.5	10.7	10.6
Printing	23.6	24.0	25.6	24.2
Chemicals	9.4	9.1	8.8	8.2
Rubber	15.5	15.3	15.2	12.6
Leather	21.4	18.0	16.0	14.9
Other Nondurable Goods	7.4	6.9	7.1	7.0
2. Nonmanufacturing	771.0	856.2	927.0	985.2
Construction	46.8	50.5	50.0	50.3
Trans., Comm., & Utilities	68.0	66.6	69.8	73.1
Wholesale & Retail Trade	240.9	255.7	274.6	287.9
Fin., Ins., & Real Estate	73.5	78.8	84.6	90.8
Service, Misc., & Mining	201.2	247.7	281.9	309.6
Government	140.6	156.9	166.1	73.5
(Federal)	(43.8)	(41.0)	(50.0)	(44.6)
(State & Local)	(96.8)	(115.9)	(116.1)	(128.9)
b. All Other Nonagricultural Employment <sup>1</sup>	117.7	103.7	96.7	94.7
c. Agriculture	5.9	5.9	5.9	5.9
4. Persons Involved in Labor Disputes	6.8	1.0	0.7	3.4

<sup>1</sup> Includes nonagricultural self-employed and unpaid family workers, and domestic workers in private households.

SOURCE: Annual Manpower Planning Report, Boston, SMSA, Division of Employment Security, December, 1970.



TABLE II  
CHANGES IN THE CITY OF BOSTON ECONOMY

	1960	1970	Change 1960-70  (in percent)
Production of Goods and Services (Billions of Dollars in 1970 Prices)	7.1	9.8	+38.0
Productivity, Production Per Worker (Dollars in 1970 Prices)	14,200	18,653	+31.4
Employment (Thousands of Workers)	501	529	+ 5.4
Structural Change Composition of Emloyment, in percent)			
Total Employment	100.0	100.0	
Finance & Insurance	10.7	13.5	+26.2
Services	16.6	21.2	+27.7
Government	18.4	19.4	+ 5.4
Manufacturing	17.4	12.0	-31.0
Trade	24.3	22.2	- 8.6
Other	12.6	11.7	- 7.1
Office Space (Millions of Sq. Ft.)	16.6	23.7	+42.8

SOURCE: Alexander Ganz and Peter Menconeri, The Expanding City of Boston Economy, Boston Redevelopment Authority, July 1970.





TABLE III

## ECONOMIC UPGRADING OF BOSTON'S POPULATION AND LABOR FORCE

	1960	1970	Change 1960-70 (in percent)
(Percent) Distribution of Families By Income Level (1970 Prices)			
All Families	100.0	100.0	
Less than \$4,000	18.6	16.1	-13.4
\$4,000-\$10,000	55.9	40.0	-28.4
Over \$10,000	25.5	43.9	+72.2
Boston's Share of All Families in the Metropolitan Area			
	25.6	21.5	-16.0
Share of Families with Incomes of Less than \$4,000	38.3	37.2	- 2.9
Educational Attainment of the Labor Force			
Percent of Workers with High School Degree	34.7	48.5	+39.8
Percent of Workers with College Degree	9.8	15.6	+59.2
Median Years of Schooling	12.1	12.4	+ 2.5
Occupational Composition of the Labor Force			
Percent of Workers in Professional and Clerical Occupations	34.7	42.4	+22.2
Percent of Workers in Craftsmen, Oper- atives and Laborer Occupations	38.0	30.9	-18.7
Commuting Patterns			
Boston's Jobs (Thousands)	501	528	+ 5.4
Boston's Labor Force	310	279	-10.1
Job In-Commuters	251	338	+34.7
Jobs Held by Boston's Labor Force in City	250	189	-24.1
Job Out-Commuters	60	89	+48.4

	1960	1965	1970	Change (in Percent)	
				1960-65	1965-70
Boston's Population (Thousands)					
Total	697	669	641	- 4.0	- 4.2
White	629	555	525	-11.8	- 5.4
Non-White	68	114	116	+67.7	+ 1.8

Source: U.S. Censuses of Population and Housing, 1960 and 1970. Alexander Ganz and Peter Menconeri, Op. Cit.

Alexander Ganz and Tina Freeman, Population and Income of the City of Boston, Recent Evolution and Future Perspective, Boston Redevelopment Authority, June 1970.



TABLE IV

MOST FREQUENTLY AVAILABLE JOB BANK POSITIONS

<u>Occupational Group</u>	<u>Wage Range</u>
Electrical Engineering	\$6,000-\$20,000
Mechanical Engineering	7,500- 24,000
Industrial Engineering	8,000- 20,000
Computer Programmer/Mathematician	7,200- 21,000
Nursing	7,800- 10,000
Miscellaneous Managerial Work	4,800- 12,000
Secretarial	5,000- 8,600
Stenography	6,300- 7,000
Typing	4,200- 8,400
Stenog., Typing, N.E.C.	4,700- 7,200
Bookkeeping	6,000- 10,000
Chasiering	5,300- 6,200
Automatic Data Processing	5,300- 6,200
Computing and Account Recording N.E.C.	5,000- 8,500
Clerical Work, Shipping & Receiving	-----
Stock Checking & Related Work	-----
Miscellaneous Clerical	-----
Saleswork, Real Estate, Insurance	5,400- 10,000
Saleswork, Commodities NEC	6,000- 12,000
Sales Clerking	-----
Canvassing & Soliciting	-----
Domestic Housework	-----
Food Serving	3,600- 5,600
Cooking, Large Hotels & Restaurants	4,400- 10,000
Cooking, Small Hotels & Restaurants	-----
Kitchen Work N.E.C.	5,200- 5,300
Attendant Work	5,200- 6,000
Guards and Related Services	4,000- 5,200
Police & Related Work, Except Public Serv.	-----
Cleaning & Related Services	5,200- 6,000
Janitorial Services	-----
Machinery & Related Work	9,000- 9,100
Toolmaking & Related Work	-----
Turning	-----
Metal Machining, N.E.C.	5,200- 5,400
Fabricating Machine Work	-----
Misc. Metalworking	7,800- 8,000
Motorized Vehicle & Eng.Equip. Repairing	-----



# MOST FREQUENTLY AVAILABLE JOB BANK POSITIONS

DOT

338  
351  
390  
706  
710  
714  
726  
786  
787  
304  
306  
310  
329  
362  
399  
305  
306  
313  
320  
322  
329

## Occupational Group

## Wage Range

Misc. Machine Install. & Repairing	\$	-----
Printing Press Work		-----
Plastics, Synthetics, Rubber, Leather Working	4,000-	5,300
Metal Unit Assembling & Adjusting	5,500-	6,300
Fabrication & Repair of Instruments		-----
Fabrication & Repair of Photo Equipment	5,200-	5,400
Assembly & Repair of Electronic Comp. NEC	4,400-	8,800
Machine Sewing, Garment	4,200-	5,200
Machine Sewing, Nongarment	4,400-	6,200
Sheet metal Work	9,000-	9,100
Transport. equip. Assembling & Repair	6,100-	6,300
Arc Welding	6,200-	8,000
Assembly, Install. & Repair of Elect. NEC		-----
Plubing, Gas Fitting, etc.	8,000-	9,000
Misc. Structural Work		-----
Heavy Truck Driving		-----
Light Truck Driving		-----
Passenger Transportation NEC	5,200-	6,200
Packaging	5,000-	5,500
Materials Moving, storing NEC		-----
Packaging, materials handling NEC	4,800-	6,200





TABLE V

## CITY OF BOSTON INDUSTRIAL EMPLOYMENT BY OCCUPATION

	Construction	Manufacturing	Trans; Comm; P.U.	Wholesale Trade	Retail Trade	Fin; Ins; R.E.	Services	Government	All Industries
Tech. & Kind.	1,000	6,000	3,000	1,300	1,400	2,200	42,000	13,000	69,9
rs, Off. & Prop.	1,800	4,000	3,500	8,700	17,600	16,000	7,500	7,500	66,6
al, Kindred	900	8,300	11,000	9,500	11,500	36,000	17,900	32,800	127,9
Workers	100	1,700	400	7,900	17,600	13,200	700	100	41,7
men, Fore. & Kind.	9,000	12,300	9,200	3,000	6,000	1,300	6,500	6,600	53,9
ives & Kindred	1,600	28,300	11,000	8,000	8,300	300	5,600	2,600	65,4
e Workers	100	1,000	1,300	300	13,800	4,100	34,400	13,900	68,9
rs, Non-Farm	3,200	3,200	4,000	2,600	2,700	1,000	2,200	3,000	21,9
occupations	17,700	64,500	43,400	41,300	78,900	74,100	116,800	79,500	516,2

SOURCE: Alexander Ganz and Peter Menconeri, The Expanding City of Boston Economy, Boston Redevelopment Authority, June 1970. Tomorrow's Manpower Needs, Volume IV, U.S. Department of Labor, Bureau of Labor Statistics, 1971.



TABLE VI

## CITY OF BOSTON INDUSTRIAL EMPLOYMENT BY OCCUPATION

	Construction	Manufacturing	Trans; Comm; P.U.	Wholesale Trade	Retail Trade	Fin; Ins; R.E.	Services	Government	All Industries
Tech. & Kind.	1,300	9,000	4,000	1,900	2,000	4,000	56,000	18,800	97,000
rs, Off. & Prop.	1,800	4,700	3,800	8,600	17,500	22,700	11,200	9,400	79,700
al, Kindred	1,000	9,800	11,900	9,900	16,400	43,100	28,200	37,400	157,700
Workers	100	2,200	1,000	8,100	21,300	18,800	1,200	100	52,800
men, Fore. & Kind.	9,400	14,300	10,700	3,600	8,000	1,600	8,200	7,400	63,200
ives & Kindred	2,000	31,400	12,200	7,200	10,100	400	7,700	2,600	73,600
e Workers	100	1,000	1,500	300	16,700	3,300	50,200	18,600	91,700
rs, Non-Farm	2,900	2,600	3,900	2,200	3,600	1,200	2,300	3,000	21,400
Occupations	18,600	75,000	49,000	41,800	95,600	95,100	165,000	97,300	637,400

SOURCE: Alexander Ganz and Peter Menconeri, The Expanding City of Boston Economy, Boston Redevelopment Authority, June 1970. Tomorrow's Manpower Needs, Volume IV, U.S. Department of Labor, Bureau of Labor Statistics, 1971.



TABLE VII

## CITY OF BOSTON INDUSTRIAL EMPLOYMENT BY OCCUPATION

	Construction	Manufacturing	Trans; Comm; P.U.	Wholesale Trade	Retail Trade	Fin; Ins; R.E.	Services	Government	All Industries
Tech. & Kind.	300	3,000	1,000	600	600	1,800	14,000	5,800	27,
s, Off. & Prop.	--	700	300	-100	-100	6,700	3,700	1,900	13,
al, Kindred	100	1,500	900	400	4,900	7,100	10,300	4,600	29,
Workers	--	500	600	200	3,700	5,600	500	--	11,
men, Fore. & Kind.	400	2,000	1,500	600	2,000	300	1,700	800	9,
ives & Kindred	400	3,400	1,200	-800	1,800	100	2,100	--	8,
e Workers	--	--	200	--	2,900	-800	15,800	4,700	22,
s, Non-Farm	-300	-600	-100	-400	900	200	100	--	-
Occupations	+900	+9,500	+5,600	+500	+16,700	+21,000	+48,200	+17,800	+121,

SOURCE: Alexander Ganz and Peter Menconeri, The Expanding City of Boston Economy, Boston Redevelopment Authority, June 1970. Tomorrow's Manpower Needs, Volume IV, U.S. Department of Labor, Bureau of Labor Statistics, 1971.





TABLE VIII

## Industrial Composition of Boston MAPC Labor Force 1970

	NUMBER	PERCENT
Construction	14,564	4.3
Manufacturing	58,554	17.5
Transport. Com., P.U.	24,736	7.5
Wholesale	15,412	4.6
Retail	52,022	15.6
Finance, Ins. K.E.	31,321	9.4
Services	113,326	33.8
Public Admin.	23,742	7.1
TOTAL	334,885	100.0%

Source: 1970 Census

## Industrial Composition of Boston MAPC Labor Force, 1970

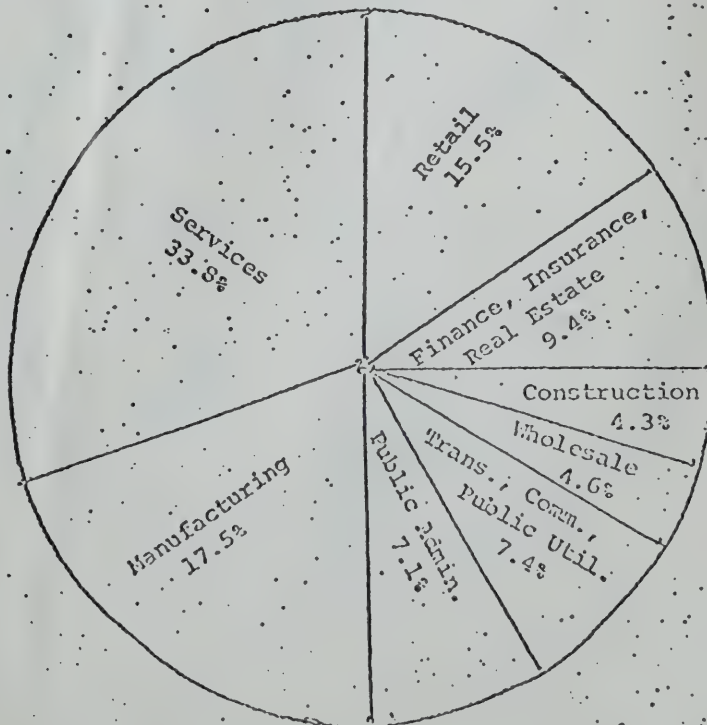




TABLE IX

Occupational Composition of the Boston MAPC Labor Force, 1970 and 1975.

	1970		1975	
	<u>NUMBER</u>	<u>PERCENT</u>	<u>NUMBER</u>	<u>PERCENT</u>
Professional, Technical	59,240	17.7	65,000	18.6
Managerial	20,671	6.3	25,000	7.2
Sales Workers	21,671	6.4	23,000	6.6
Clerical	89,103	26.6	92,000	26.3
Craftsmen, Foremen	33,470	10.0	33,000	9.4
Operatives	44,523	13.3	40,000	11.4
Service Workers	52,511	15.7	60,000	17.2
Laborers	13,247	4.0	12,000	3.4
TOTAL	334,885 <sup>1</sup>	100.0%	350,000 <sup>2</sup>	100.0%

SOURCE: 1970 Census

Occupational Composition of Boston MAPC Labor Force, 1970

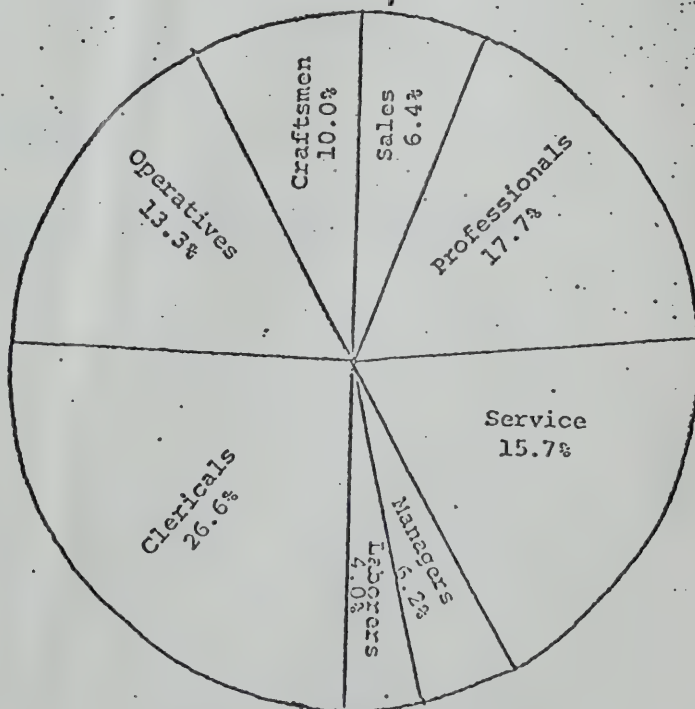




TABLE X

Occupational Composition of the Boston MAPC Labor Force, 1970 and 1975.

	1970		1975	
	<u>NUMBER</u>	<u>PERCENT</u>	<u>NUMBER</u>	<u>PERCENT</u>
Professional, Technical	59,240	17.7	65,000	18.6
Managerial	20,671	6.3	25,000	7.2
Sales Workers	21,671	6.4	23,000	6.6
Clerical	89,103	26.6	92,000	26.3
Craftsmen, Foremen	33,470	10.0	33,000	9.4
Operatives	44,523	13.3	40,000	11.4
Service Workers	52,511	15.7	60,000	17.2
Laborers	13,247	4.0	12,000	3.4
TOTAL	334,885 <sup>1</sup>	100.0%	350,000 <sup>2</sup>	100.0%

1

Source: 1970 Census

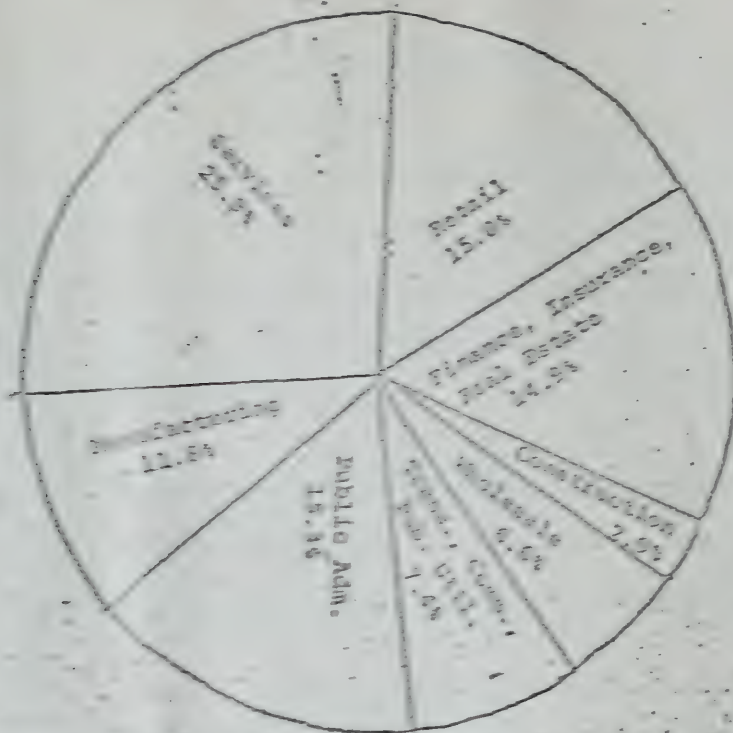
2

Source: Projections based upon 1960-1970 changes.

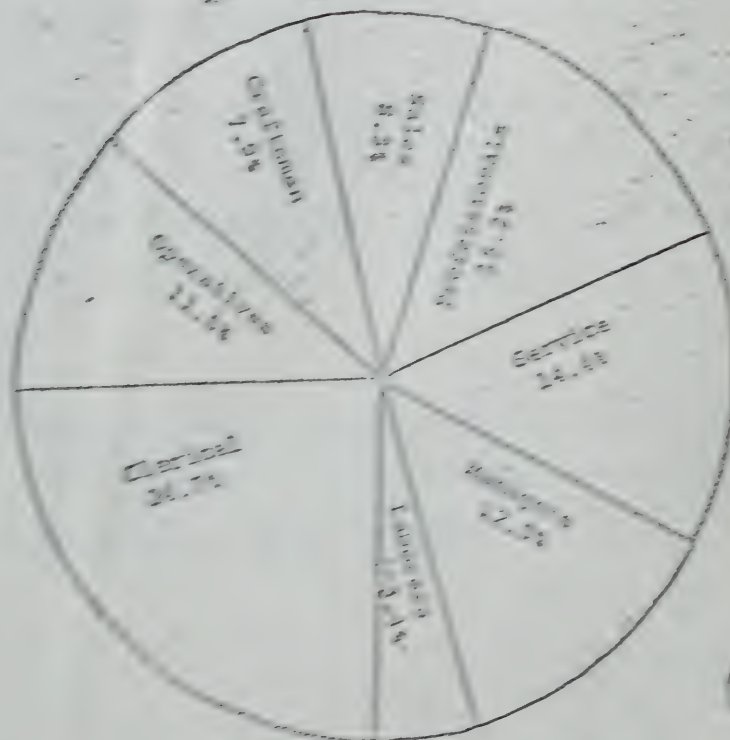




Projected Industrial Composition of Boston Work Force, 1980



Projected Group Social Composition of Boston Work Force, 1980





#### LOCAL UNEMPLOYMENT ESTIMATES

The Boston SMSA is the functional labor market area for which Division of Employment Security calculates a monthly unemployment rate. The rate, according to DES, is the number of unemployed persons in the SMSA, divided by the current SMSA work force =  $\frac{u}{wf}$ . The validity of both the numerator (u) and the denominator (wf) have been questioned in the past.

The numerator (u) is made up of the insured unemployed (iu) and the uninsured unemployed (uu). The denominator (wf) is the number of jobs in the area. By definition, work force thus double counts people holding two or more jobs.

For large areas, a state, a region, or the United States, work force closely approximates labor force. The larger the area, the closer work force is to labor force. (Most U.S. residents work in the U.S. The only difference here would be the double count.) But for the Boston MAPC, the work force is greater than the labor force by about 200,000 people.

The City of Boston, as opposed to the SMSA, rarely has an "official" unemployment rate. Every ten years, the Census gives a rate. Occasionally, special studies give Boston an unemployment rate. But in 1973, the Census rate is three years old. How the MAPC can estimate its rate regularly has been a concern for obvious reasons.

What has been attempted is to estimate Boston's unemployment rate from the available data; The 1970 Census; the Low Income Employment Census Study; the special study for EEA; and the monthly SMSA data.



The 1970 Census was taken in April 1970; the Low Income Area Profile in October 1970; the EEA study in May 1971. The DES gives the SMSA data monthly. The figures for the first three are given in Table I. The roughly equivalent SMSA data are in Table II.

TABLE I

Unemployment in the City of Boston

	<u>4-70</u>	<u>10-70</u>	<u>5-71</u>
Labor Force, Boston	278,607	269,949	277,900
Unemployment, Boston	12,102	18,352	23,500
Employment, Boston	266,505	251,597	254,400
Rate, Boston	4.3%	6.8%	8.5%

Source: U.S. Department of Commerce, Bureau of the Census

TABLE II

Unemployment in the Boston SMSA

	<u>4-70</u>	<u>10-70</u>	<u>5-71</u>
Work Force, SMSA	1,449,500	1,457,700	1,426,200
Unemployment, SMSA	52,600	64,100	88,700
Employment, SMSA	1,396,900	1,393,600	1,387,500
Rate, Boston	3.6%	4.4%	6.0%

Source: Division of Employment Security

A linear regression line was developed that would estimate the number of unemployed people in Boston, given the number of unemployed people in the Boston SMSA.

The equation giving this estimate is:

$$B. \text{ Un.} = .296 \text{ SMSA Un.} - 2300.$$

The standard error of the estimate for the equation,  $Sy.x = 1300$ .





This equation was then applied to the monthly SMSA data for the years 1970, 1971, and 1972. The results of this equation are shown in Table III. The assumption was that labor force size was not able to be derived from SMSA work force data, because of the double counting. The labor force was thus assumed to be constant at 275,000, the approximate average of the three months for which data was available. The unemployment rate estimates are shown in Table IV.

TABLE III

Unemployment in the City of Boston, 1970-1972

	<u>1970</u>	<u>1971</u>	<u>1972</u>
January	12,352	20,403	22,271
February	13,003	21,380	24,340
March	13,092	22,090	25,228
April	13,270	22,268	25,228
May	14,542	23,955	24,428
June	18,190	28,898	29,550
July	19,071	26,264	27,566
August	18,124	24,700	25,210
September	17,058	22,000	22,712
October	16,674	20,729	21,173
November	18,923	21,676	22,564
December	18,775	22,031	22,386
Annual Average	16,090	23,032	24,430

SOURCE:

The Boston SMSA data published monthly by DES in Massachusetts Trends were used to estimate City of Boston unemployment by the formula: Boston unemployment = .296 SMSA unemployment - 2300.



TABLE IV

Unemployment Rate in the City of Boston

	<u>1970</u>	<u>1971</u>	<u>1972</u> .
January	4.5	7.4	8.3
February	4.7	7.8	8.9
March	4.8	8.0	9.2
April	4.8	8.1	9.2
May	5.3	8.7	8.9
June	6.6	10.5	10.7
July	6.9	9.6	10.0
August	6.6	9.0	9.2
September	6.2	8.0	8.3
October	6.1	7.5	7.7
November	6.9	7.9	8.2
December	6.8	8.0	8.1
Annual Average	5.6%	8.4%	8.9%

SOURCE:

The monthly unemployment estimates in Table III were divided by the labor force average of April 1970, October 1970, and May 1971, which was approximately 275,000.

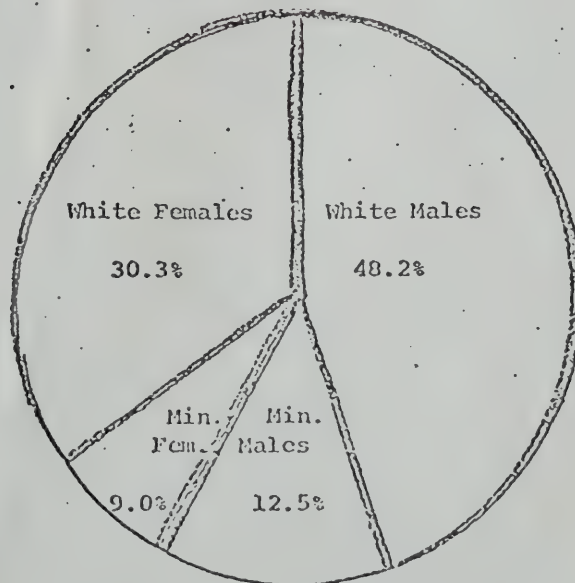


### Composition of Unemployment.

The 1970 Census remains the only detailed source of information of the composition of unemployment by age, race, and sex. It seems unlikely that unemployment among various groups of the labor force would remain constant as the overall unemployment rate has increased from 4.3% to 8.2%. The fact that 20% of the 14,366 unemployed people in April 1970, the month of the Census, were black cannot lead to the conclusion that 20% of the present 27,500 unemployed people are black. There remains no way of accurately assessing the composition of unemployment in the absence of a house-to-house survey (a sample of those people collecting unemployment insurance would be a sample of only about half of the unemployment in the area. This sample would be biased because people just entering the labor force cannot collect unemployment insurance. A further bias would result in that some people have been unemployed long enough to exhaust their unemployment insurance claims.)

CHART II

Composition of Unemployment, 1970



SOURCE: 1970 Census of Housing and Population, U.S. Department of Commerce, Bureau of the Census, 1970.























